BETTER FARMING METHODS

DECEMBER 1958
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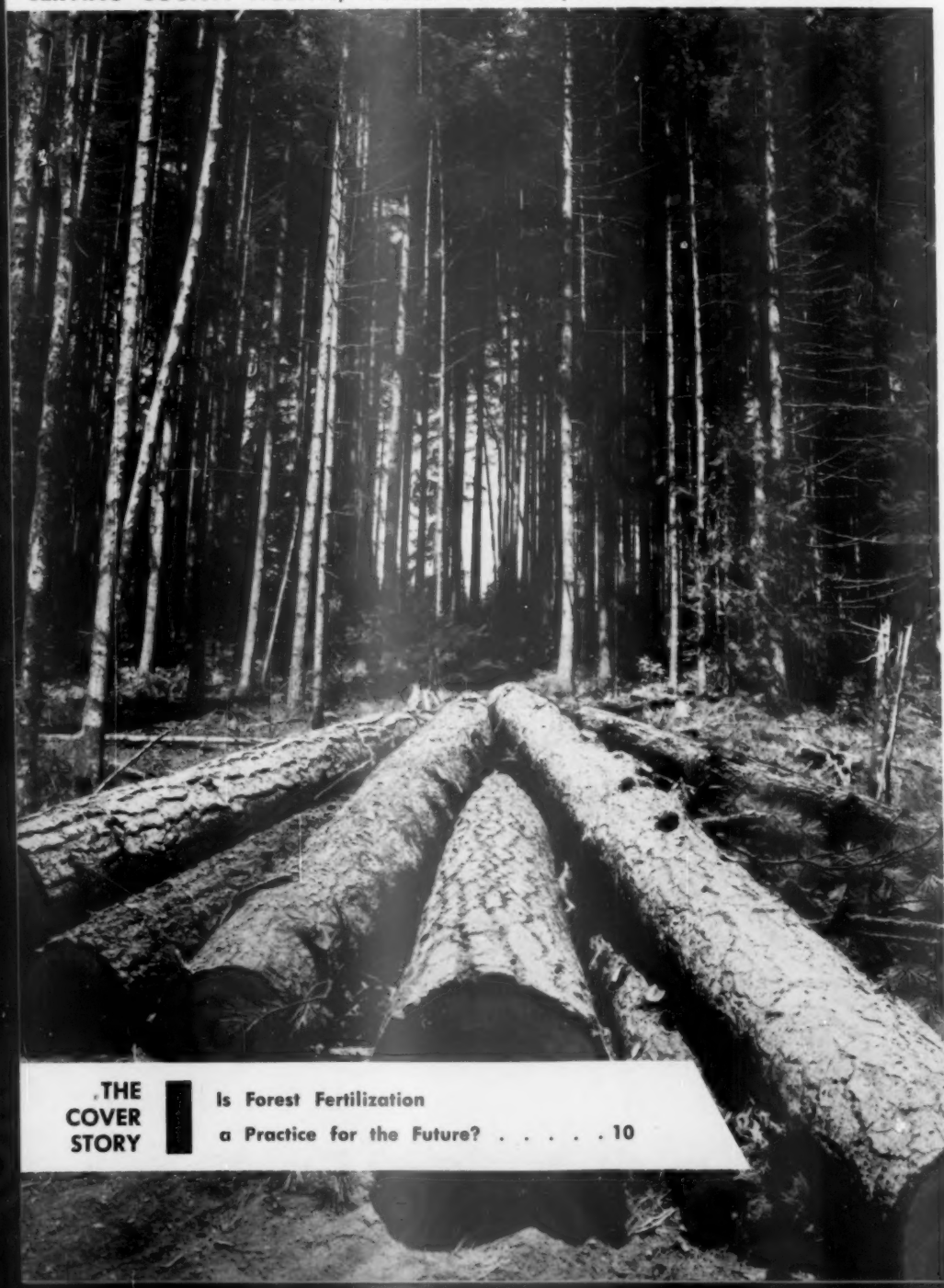
SERVING COUNTY AGENTS, VO-AG TEACHERS, AND OTHER AG LEADERS



THE COVER STORY — Is Forest Fertilization a Practice for the Future? 10

PURINA VISITS ANOTHER FARMER OF TOMORROW

Joe McCarty and one of his champions pose on the family's Western Kentucky farm.

This farmer of tomorrow will serve his community

When Joe McCarty gets his degree in animal husbandry from the University of Kentucky next spring, he will return to his home area. There he will join a business firm that serves local livestock and poultry raisers. So, many farmers of his community are to benefit from his education and experience.

Joe already has demonstrated his talents for leadership. In high school, he was a class officer all four years and was voted the most outstanding student of his class. He served as vice-president, secretary, president and chairman of the scholarship committee of his youth organization.

This leadership, plus his outstanding results with livestock, brought him election as American Farmer. In six years, Joe showed and sold 14 blue ribbon calves at the Western Kentucky Beef Cattle Show and Sale. His many trophies include three grand championships and three reserve championships in beef cattle at the Western Kentucky Show and Sale. He holds a grand championship in the youth division for lambs at the Tri-State Show at Evansville, Indiana, along with three other awards. At the University, he is a member of the livestock judging team which has judged at major livestock shows.

Purina congratulates Joe McCarty . . . farmer of tomorrow . . . on his success and on his intention to serve his community.

* * *

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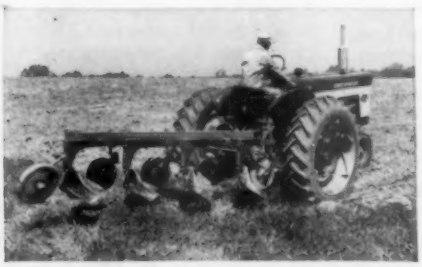

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BETTER FARMING METHODS

DEC. 1958

Vol. 30 No. 12

THE MAGAZINE FOR AMERICA'S AG LEADERS

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features

FERTILIZING FORESTS—A PRACTICE FOR THE FUTURE? ..... p. 10
What should you tell farmers who ask about the possibilities of using fertilizer on their woodlands? Does forest fertilization really pay? This is the topic covered in this exclusive Better Farming Methods feature.

STUDENT WORKERSHIPS ..... p. 12
Student workerships, a new twist in education, are helping ag students select the right agricultural career. Actual on-the-job training is an important part of the program.

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A report of the annual meeting of the Soil Conservation Society of America.

INDUSTRIAL EXPERIENCE CAN IMPROVE VO-AG CLASSES ..... p. 17
The author of this article suggests summer work in industry to keep ag teachers abreast of new ideas in agriculture. His recommendations are based on personal experience.

GET MORE MILEAGE FROM YOUR ANNUAL REPORT ..... p. 22
This article tells how two Minnesota County Agents got extra benefits from their annual reports by publishing them in the local weekly paper. You may get some ideas here to get more mileage from your annual rport.

THE EXTENSION AGENT'S DILEMMA ..... p. 24
Extension workers are noted as being busy people but they often have difficulty explaining just what they have accomplished. In this article the cause of this problem is explained.

SELL YOUR IDEAS WITH FARM RADIO PROGRAMS ..... p. 31
How well do you know the people at your local radio station? Do you know what they like for their programs? A former radio station program manager offers many helpful suggestions in this special feature.

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PROFESSIONAL MAGAZINE FOR LEADERS WHO TRAIN AND ADVISE FARMERS

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New from Northrup King...

NOCULIZED

TRADE MARK

ALFALFA SEED

Breakthrough in Seed Research Gives Farmers Pre-Inoculated Alfalfa Seed

A revolutionary new process that eliminates the need for on-the-farm inoculation of alfalfa seed is announced by Northrup King. This new pre-inoculation process, called NOCULIZED, means Midwest farmers will be able to buy alfalfa seed already inoculated with live, effective strains of nitrogen-fixing bacteria. Seed is ready for planting with no need for further inoculation.

Solves farm problem

Agricultural specialists have recommended inoculation of alfalfa seed prior to planting for over a half century. However, on-the-farm inoculation is a troublesome problem. Farmers, during the spring planting rush, have often applied the treatment inadequately or not at all.

And when farmers do inoculate on the farm, seed must be planted within a few hours or the bacteria die. Re-inoculating is necessary if there are any planting delays.

Now, NOCULIZED alfalfa seed solves these problems and farmers get these benefits:

1. A greater number of farmers will be following a recommended practice—planting inoculated alfalfa seed.
2. Every seed planted will be NOCULIZED with live, specially-selected strains of nitrogen-fixing bacteria.
3. NOCULIZED seed assures a more uniform nodulation and maximum nitrogen build-up.
4. It plants easier and more accurately than seed inoculated by conventional methods—no sticking, skipping or lumpiness.
5. It is not necessary to re-inoculate due to bad weather or unexpected delays in planting.
6. NOCULIZED seed saves time and the mess of on-the-farm inoculation during the spring planting rush.

Entirely new concept

Farmers want seed that is pre-inoculated and ready to plant. Northrup King's seed research team tackled the problem, testing new techniques, new methods. They developed a new process—NOCULIZED—that is distinctly different and superior. NOCULIZED seed is already inoculated with selected, nitrogen-fixing bacteria strains *when the farmer buys it*. He can plant it immediately or months later and still get effective nodulation.

The NOCULIZED process involves four basic steps. First, the seed is processed to make the seed coat more permeable. Then a liquid suspension of selected nitrogen-fixing bacteria is applied. Next a vacuum is created, forcing these bacteria inside the seed where they are protected, alive by the seed coat. Finally, the seed is dried, bagged and ready for planting.

NOTE GOOD NODULES of alfalfa seedlings grown from NOCULIZED seed. Pencil points to nodules filled with millions of nitrogen-fixing bacteria. With NOCULIZED alfalfa seed from Northrup King, farmers can get alfalfa seed that is *already inoculated* when they buy it. New process saves time, fuss, mess, assures complete inoculation.

LABORATORY COMPARISON of NOCULIZED alfalfa with uninoculated alfalfa shows clearly developed nodules on pre-inoculated plants (left), none on plants at right. Plants in both bottles were started on the same day. Notice the difference in plant growth, too—a result of the NOCULIZED process.

Thoroughly tested

The NOCULIZED process was developed by Northrup King in conjunction with an internationally famous private research organization. Work on the process began in 1949. Tests prove that NOCULIZED seed—with the living bacteria *under* the seed coat—retains all of the seed's vigor and strength of germination. And the bacteria will live through changes of temperature and environmental conditions in a way never before possible with inoculated seed.

Laboratory, greenhouse and replicated field tests have shown consistently that NOCULIZED seed gives yields equal to or better than seed inoculated in the conventional way. *Over 140,000 pounds of* NOCULIZED *Northrup King alfalfa seed was planted on Midwest farms in 1958*—in the most extensive on-the-farm test of a new alfalfa seed development ever made. This seed was planted under a wide variety of conditions and in many different ways. Careful analysis of these farm trials proves conclusively that NOCULIZED seed not only produces maximum nitrogen fixation but also saves farmers valuable time during spring planting.

NK

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KEEPING UP IN AGRICULTURE

- **Scientists develop killed-virus Newcastle vaccine**
- **What's good for the chicken don't help the cow**
- **Now you can kill bugs without poison**
- **New fertilizer applicator developed by scientists**

South Carolina Researchers Pellet Coastal Bermuda

Coastal Bermuda, the Southland's wonder grass, appears headed for new honors in the Southeast.

Coastal Bermuda pellets are being turned out at Clemson Agricultural College in a pilot plant designed by Clemson agricultural engineers. The Coastal is being cut and moved as quickly as possible from the field to a dehydrator where it is reduced to a moisture content of about 10 percent. Cooling and drying of the pellets is done by forced air and the pellets are placed in bags and stored for future feeding tests.

Insect Pests Take Heavy Toll

Despite agricultural research, which has brought many insect pests under control, farmers are still paying a yearly toll of 13 billion dollars to these pests. That is more than one-third of the gross farm value of agricultural commodities produced last year. These remarks from Dr. Byron T. Shaw, administrator of the Agricultural Research Service, indicate there is still a long way to go in our fight against insects, diseases, weeds, and other hazards that cost farmers money.

Disk-Type Fertilizer Applicator

Agricultural engineers of the Oklahoma Experiment Station have developed a disk-type fertilizer applicator that has proved superior to split-boot and other conventional applicators in Oklahoma Station trials. The disk-type applicator, they say, enables farmers to secure, with no increase in the seeding rate, thicker and more uniform stands, possible increases in yield, and plants better suited to mechanical harvesting.

Tranquilizers Tame the Brahman

A recent report from the Texas Experiment Station says that when the tranquilizer, hydroxzene, was fed to Brahman-type heifers and bulls at 5 to 10 mg. per head per day for 84 days, their gain was improved only slightly, but their temperament was improved noticeably.

Dust Desiccation Deadly to Insects

Scientists at the University of California report that a revolutionary method called "dust desiccation" is proving practical against a wide range of household insects. No chemicals or poisons are involved. Instead, fine dusts with certain characteristics absorb the wax coating insects need to protect vital body moisture. Deprived of this thin coating, the insects literally dry to death and they often die faster than from the most lethal poison.

The new method has been found effective against termites, cockroaches, houseflies, mosquitoes, ants, fleas, bed bugs, mites, ticks, and bees. Outstanding dust desiccant materials are fuller's earth clays, diatomaceous earths, silica gels, aerogels, and precipitates.

Dairy Cows Don't Respond to Light

The practice of providing artificial lighting for chickens so they will lay more eggs has no effect on dairy cows from the standpoint of milk production or feed consumption according to tests conducted by the Colorado State University Experiment Station.

Colorado researchers used two pens of Holstein cows for the test. They both got the same feed and were treated exactly the same.

The results showed no difference in either milk production or feed consumption. Actually, the only effect the lights seemed to have on the cows was that it caused them to wake up earlier in the morning and line up before the door of the milking parlor.

Fertilizer Pays, Even on Good Soil

It's wrong to assume that it's wasteful to fertilize land that yields more than 100 bushels of corn per acre. Soil Scientist A. C. Caldwell and Agronomist John Thompson of the University of Minnesota have test results which show that applying fertilizer on land that produced 138 bushels could still boost yields by 21 bushels to 159 per acre. Fertilizer cost in these tests was $12 per acre and yield increase was about $25 resulting in a net gain in profit of $13 per acre.

Newcastle Disease Vaccine Developed by USDA Scientists

Believing that killed-virus vaccines offer the best possibility for treating farm animals, USDA scientists have developed a safe, effective killed-virus vaccine for Newcastle disease in chickens. The new vaccine is incapable of spreading a disease, is free of contaminating disease organisms, and retains its ability to induce immunity after storage.

ECHOES

A COMPLAINT WE AGREE WITH

I am not a crusader for safety, but when I see a picture such as that shown in the A. B. Kennerly article, page 29, of your October issue, it makes me wonder if our publicity and propaganda on safety is doing any good.

I recall that your magazine has been very cooperative in carrying safety plugs because you realize, as we do, that agriculture is a hazardous industry as your picture proves with the unguarded belts and gears, and that we need to do everything we can, particularly with youngsters growing up, to make farmers safety conscious and avoid as much as possible showing the opposite.

I realize, of course, the story was told for another purpose, but perhaps a better picture could have been selected. — *R. R. Parks, Extension Agricultural Engineer, University of California, Davis, Calif.*

ABOUT THE OCTOBER COVER

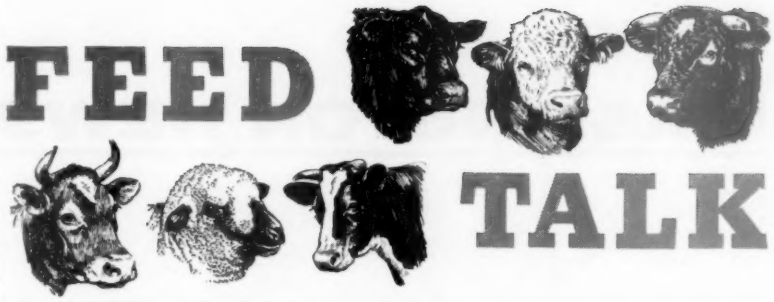
I just want to comment that I think your October, 1958 cover picture is one of the finest I've seen for a long time. I especially like the true-to-life way the S.C.S. technician is dressed, his sun-tan and his curled map and the way the land is so well worked into the picture. — *Lee Hamilton, county agent, Council, Idaho.*

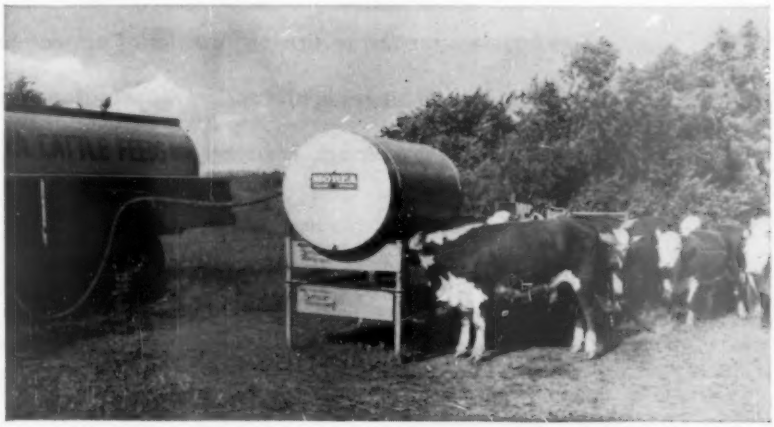
FINDS BFM HELPFUL

As a farm manger, I have been interested in your publication, "Better Farming Methods" for several years. Your articles and bulletin service have been helpful. — *John R. Tate, farm manger and assistant trust officer, First Trust & Savings Bank of Kankakee, Kankakee, Ill.*

"Perhaps we had better drop off that literature on artificial insemination at some later date!"

FEED TALK





Thousands of Farmers Now Use Liquid Feed

Thousands of progressive stockmen and dairymen are increasing their profits by feeding cattle and sheep an amazing new liquid feed supplement. This modern, scientific development in nutrition, known as MOREA® Liquid Feed, is fed "free choice" along with large amounts of coarse roughage and small amounts of grain. The result is more and better meat and milk at lower cost.

MOREA Liquid Feed is scientifically designed and formulated to take full advantage of the natural process by which ruminants obtain their nutrition. In cattle and sheep, the rumen or first stomach is a huge fermentation vat in which billions of bacteria and protozoa assimilate the feeds eaten by the animal. In turn, these micro-organisms and their products are consumed by the animal and used to make meat and milk.

To build protein, rumen micro-organisms require a *hydrogen donor* in combination with nitrogen, certain other elements, and energy. Ethanol is a highly-efficient *hydrogen donor*. MOREA Liquid Feed is the only feed supplement on the market that contains ethanol. It also contains urea nitrogen, phosphoric acid, trace minerals, and molasses. MOREA Liquid Feed enables rumen organisms to build high-quality protein. Animals on MOREA feed can eat and assimilate a much higher ratio of economical roughage to grain.

Many leading stockmen and dairymen are now using MOREA Liquid Feed with outstanding success. They are reducing their feed costs, using more low-cost roughage and less grain, and producing more high-quality meat and milk. It will pay you to get all the facts on the many advantages of this modern, scientific method of feeding.

MOREA Liquid Feed is so new in some areas that distribution is just getting started. MOREA Pre-Mix for making this profit-building liquid feed supplement for cattle and sheep is produced by U. S. Industrial Chemicals Co., New York 16, N. Y., and by Feed Service Corporation, Crete, Nebraska.

MOREA is a registered trade-mark of Feed Service Corp.

WASHINGTON NEWS

by Jay Richter

The hassle over the return of vocational education funds to the individual states continues in Washington. A new plan, endorsed by several governors, is being pushed by the Administration.

Dealing With the "Wrong"

What's to be thankful for during this holiday season?

Washington does not specialize in looking at what's right with the world, and thus it probably should be. The government's problems center around the question of how to deal with what's wrong.

The fact is that we now enjoy the two blessings which are probably valued above all else throughout the world. One is peace, and the other plenty.

What's wrong with those? Nothing, as long as the peace can be kept, and plenty controlled.

There's the rub. We have peace, yet war is a constant danger; we have plenty, yet it persistently threatens to suffocate the very people responsible for it.

Surpluses, more than ever, will overshadow all discussions in the New Year of what to do about agriculture. Consider the monumental size of the problem.

A total crop this year at least 10 percent larger than any before it . . . all of this to be piled atop large carryovers of the key commodities such as wheat . . . feed supply enough to satisfy the appetites of almost twice our present numbers of livestock and poultry . . . and, finally, the crowning irony: A farm program which has been altered in such a way that it invites still greater production and additional surpluses.

Said a farm-area Congressman who was re-elected by a narrow margin, "Maybe I should demand a recount of the ballots and try to get out of this."

It's Tax Time Again

It's about time — ouch! — to think about taxes again.

Farmers, as in the recent past, have a choice as to when to pay. They may either file and pay by next February 15, getting everything done at once, or by January 15, file and pay an estimate, sending in any added amount due by April 15.

Changes made this year in the tax code may save you some money, such as: (1) A net operating loss now may be carried back three years instead of only two for the purpose of securing tax refunds. (2) An additional 20 percent first-year depreciation write-off is allowed on purchases up to $10,000 of new machinery and equipment. The amount is $20,000 in the case of someone who files a joint return. (3) Casualty losses on uninsured property are now fully deductible as ordinary income losses.

Vo-ag instructors, county agents, or anybody who has educational expenses now may deduct them, under these circumstances: When the study course, educational meeting, or whatever it may be, is undertaken "primarily" to improve on-the-job performance, or to meet the requirements of an employer.

Note that this change in the tax rules is retroactive. Such education expenses may be recovered for the three previous tax years, 1955-57, as well as deducted this year.

◆ ◆ ◆

"Oh, well! I guess things could always be worse."

Vo-Ag Back To States?

That hassle over whether vocational education should be turned back to the states is far from over.

A new proposition has met with the approval of many governors, and will be pushed by the Administration.

It makes available to the states 40 percent of the federal tax on local telephone service for vocational education work, and construction of sewage facilities. On the surface, that's much the same proposition that President Eisenhower made some while ago, and which many governors opposed.

But something new has been added. It involves a special division of funds that will guarantee the

poorer states as much as they have previously had in the grants-in-aid.

The prior proposal would have meant less to some of them. The federal government will take a net loss of almost 60½ million dollars in taxes if the proposal is accepted by Congress.

Administration leaders think it's worth it to help prove their point: Namely, that an excess of political power has been concentrated in Washington and ought to be returned to the states.

American Vocational Association leaders don't like the new plan. It would jeopardize vocational education work, charges M. D. Mobley, AVA chief in Washington. "None of the tax revenue released to the states," he says, "would be earmarked for vocational education."

Research Money Available

Here's one you may want to look into.

Federal funds are now available for research projects in educational TV, radio, films, or related media. The money — 18 million dollars over a 4-year period — will be provided under the new National Defense Education Act.

Applications for project grants will soon be accepted. Meantime, send your inquiries to the Director, Communications Media Research Program, Office of Education, Department of Health, Education and Welfare, Washington 25, D. C.

Washington News in Brief

USDA now has copies of the proceedings at the Rural Development Conference held in Memphis this summer. Address the Press Service, USDA, Washington 25, D. C. Ask for "Proceedings, Conference on RDP" . . . Radioactivity of some food products has increased since atomic weapons testing began in 1945, say government scientists, but none is yet near the danger point. USDA researchers, meantime, are trying to find effective methods of removing radioactive fallout from farm land, just in case . . . USDA expects to reach its goal, or almost, of 12½ million acres in the 1959 soil bank conservation reserve. Farmer interest has been high . . . Big farm battle in the New Year will be over wheat, according to the early signs. Surplus is vast and Secretary Benson is determined to do something about it . . . First foreign trade office to be opened by a farm organization is now doing business in Rotterdam, the Netherlands. It's a Farm Bureau project, aimed at selling more U. S. farm products abroad. In charge is George Dietz. End.

AMUSING INCIDENTS

Have you had an amusing or unusual experience as an ag leader? Better Farming Methods will pay $5 for each amusing incident accepted. Send to: Editor, Better Farming Methods, Mount Morris, Illinois.

it happened to me

Laughable situations from the ag leader's daily life

PLAIN BOOK FARMER

I had an amusing experience with a farm family in northwest Washington while working as a field representative for a milk company prior to World War II.

You've heard of plain dirt farmers; well, this fellow was a plain book farmer. He got all his farming information from books after retiring as a mathematics professor from an Eastern University. He seldom asked neighboring farmers, the county agent, or other farm organizations about farming practices.

During one visit to his place, the discussion got around to feeds and feeding. The farmer always mentioned reading "this or that" about feeding. "I read somewhere that cracked corn makes a good feed for hens," the farmer said. And I agreed that cracked corn was often used in scratch feeds for poultry.

"Well, I'm happy to hear that," he replied. "I'm going to save myself some money next year by getting me some cracked corn seed and growing my own scratch feed for the laying flock!" — *D. E. Anderson, dairy specialist, Extension Service, Oregon State College, Corvallis, Ore.*

A MIND FOR SAFETY

One day my senior students and I were discussing the merits of the slogans they had written for entry in the County Farm and Home Safety Slogan Contest, when I recalled a quip that I had seen a few years ago.

I turned to one of the boys and said, "Stanley, did you know that if all the cars in the world were lined up bumper to bumper some fool would try to pass them?" He replied, "That would be all right. There wouldn't be any coming the other way." —*George W. Myers, vo-ag teacher, Lampeter-Strasburg High School, Lampeter, Pa.*

Can fertilization make possible establishment of forest land on this eroded site?

Fertilizing Forests— A Practice For the Future?

by Laurence C. Walker
Chief Forester
National Plant Food Institute

● WHAT KIND, when to apply, and how much? These are typical questions folks ask foresters about fertilizer use. The answer, for the most part, is simply "I don't know." But that reply won't satisfy, of course.

In order to get answers, the National Plant Food Institute, research and education arm of the fertilizer industry, has a program in progress in the Southeastern United States. Past accomplishments and future plans of experimenters all over Dixie are being reviewed. From this interrogation of research and management foresters in every corner of the woods, a coordinated research program is projected for the future.

Response Is Varied!

Recently, research foresters of the Lake City, Fla., Research Center reported that flowering is appreciably stimulated by 20 pounds of 7-7-7 per tree, but the 21-year-old slash pine trees in the same stand are not responsive to 3-18-6, nor double rates of 7-7-7. Double doses of 3-18-6 increased flowering almost to the 7-7-7 rate. This is illustrative of the theory that nitrogen is more responsible than phosphorus or potash for flower development on certain soils of the Coastal Plain in south Georgia and Florida.

It is well to point out, too, that this exploratory study reports flower production only, and no seed formation. Southern pines are infamous for their ability to produce both male and female flowers and then fail to produce cones, simply because nature didn't synchronize development of sperm and egg. A chance exists that sexual synchronization may be enhanced by nutrient fertilization. In another study by Foresters Hoekstra and Mergen, five pounds of 3-12-6 enabled more trees to flower, but 10 pounds was better. This experiment was with 7-year-old slash pines.

Seed Business Booming!

Why this concern for increasing flower production! In the 15 southern states, over 800,000 acres were planted in 1957. That is more than one-sixth of the total acreage planted up through 1956; and this phenomenal logarithmic increase in production is destined to continue. At approximately a thousand seedlings on each acre planted, one can visualize the giant business seed production and collection is becoming.

Cone collection until now has generally been done by off-season farm laborers who followed logging operations. Frequently this has meant poor genetic quality since in many forest cutting operations in the past decade, only poorly-formed, low-vigor trees were cut. Cones on high quality trees were out of reach.

Now, however, foresters are demanding seedling progeny from superior parents. This often means climbing with spurs, ladders, or even balloons to obtain cones.

Seed Orchards Established

Another way is to grow seed in an orchard. Here, fruitful branches of high-quality producing trees are grafted on to knee-high seedlings. Naturally, the offspring will bear the same genetic characteristics of the tree from which the scion was taken. To make these seed production areas and seed orchards more prolific is essential if the demand for plus stock is to be met.

Yet another forest management technique demands vast quantities of seed. Direct seeding by airplane is done over wide expanses of lands barren of seed trees. Longleaf pine, which germinates shortly after contact with mineral soil, is especially well-adapted. Although the cost of this procedure compares favorably with planting of nursery-grown trees, about 10 times as much seed is required to stock the land.

Fertilizer Response Tested

After seedlings are established, rapid growth is wanted. Testing responses to fertilizer application is being done all through the South. In Arkansas, for example, a paper company works with shortleaf pine;

The uptake of fertilizers by loblolly pine is studied in this isotope laboratory at the University of Georgia using radioactive phosphorus.

Does it pay to fertilize forest land? This is a question farmers are likely to ask you after reading about this practice in national farm magazines. What can you tell them? For the answer to this question we called on specialist of the National Plant Food Institute. Their Chief Forester, Dr. Laurence C. Walker, has written this article especially for Better Farming Methods readers.

As his article suggests, there are many unanswered questions on forest fertilization. However, with the research program now underway, many of these doubtful aspects of fertilizing trees will be cleared up.

in Louisiana its the School of Forestry checking on loblolly pine; in Georgia, federal agencies hunt for growth improvement to slash pine and yellow poplar. Thus far, results are inconclusive. Perhaps tripling the rates of application — though not economical for the present — may raise site potential, just as for cotton and corn.

Rules for Small Plots

Some general rules may be helpful for back-yard foresters. Where analyses of soil and foliage are not available, the National Joint Committee on Fertilizer Application reports that four to six ounces of 10-10-10 or similar complete fertilizer may be applied in a circular band around individual trees two to six feet tall. Make appropriate increases in rates for larger trees, of course. One-half ton per acre for closely-spaced Christmas tree crops, particularly in the northern United States, is recommended.

Pines have the lowest nutrient requirements of all commercial forest trees; and the four southern species are probably least among the pines. Hardwoods like beech, birch, and maple are generally more demanding than conifers. So increase doses with species demand!

Fertilization and Wood Quality

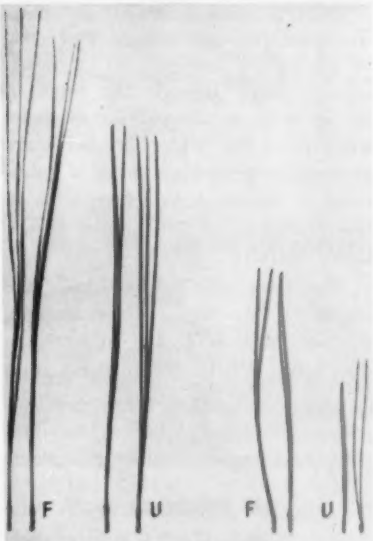
Technical control folks in the paper mills want to know if fertilization could be reason enough to recommend fertilizers in the forests of the future, even if growth isn't improved.

Foresters of one large industrial wood-producing corporation are so concerned about the lack of basic information on natural nutrition that the group leader for the technical control department — a man in the mill, not the woods — conducted a worthwhile study to show that even for slash pine, way down in Dixie, foliar analysis might eventually be used to assess needs of particular forest stands for fertilizer treatment, and to isolate areas where such a supplement would have the greatest success. Growth relationships were shown for foliage concentrations in autumn.

Other areas to be explored in a coordinated program are (1) breeding for strains of trees which can effectively use added fertilizer nutrients, and (2) producing white oak mast for squirrel food.

Replies to our introductory questions won't come easy. Numerous *whys* will be encountered as scientists in indoor chemical workshops and outdoor biological labs cope with nature.

The National Plant Food Institute hopes to make their task easier by providing technical services, grants-in-aid, and a clearing house for reception and dissemination of forest fertilizer information. End.



Fertilizers increase needle length of loblolly (left) and shortleaf pines (right) in the South.

Marking outstanding trees for production of high quality seed. (Courtesy M. Reines.)

A new twist in education—

Student Workerships!

by Dale W. Andrews

● SCHOLARSHIPS, FELLOWSHIPS, assistant-ships, are familiar concepts, but the snappy term "workerships" appears to be newly coined. Even though the name is being used to identify a program similar to the widely-known work experience programs, there is a new twist to workerships which adds to the potential of this sound educational activity.

The idea of "workerships" was conceived during a three-meeting advisory session called to evaluate the Santa Paula (California) high school vocational agriculture program. It was introduced as a way of getting the best qualified students interested and concerned with entering the various fields of agricultural activity, including agricultural processing, agricultural services and agricultural production.

The Santa Paula Program

Six boys each earned $100 at 75 cents an hour under the provisions of the workership program at Santa Paula this summer. The low rate of pay was purposely established to be sure the applicants were after knowledge and experience and not just seeking a summer job. More than six boys applied and more than that number of workerships were pledged. However, a policy of limiting placement to boys genuinely seeking an educational experience was established and followed. Not every boy rates a scholarship; likewise, every boy is not entitled to a workership.

During the first summer of the program each of the six workership sponsors was more than satisfied. When the boys had earned their

THE STORY IN BRIEF:

"Workerships" is a term used to describe a sound procedure that adds extra sparkle and glamour to agricultural education. At the same time, it provides practical education in agriculture.

Workerships were proposed as a way to get the best qualified students interested in various agricultural careers. Students engaged in the program simply have a supervised work program in some phase of agriculture. Written working agreements keep the experiences on an educational rather than a "flunky" plane.

One phase of Santa Paula Ag Student Jim Beekman's (right) "workership" is the development of a skill in pruning.

Bill Marchant, right, explains the intricacies of hybrid petunias to John Johnson, a "workership" recipient learning agriculture the practical way at a seed farm near Santa Paula, Calif.

$100 at 75 cents an hour, each was given a substantial raise in pay and hired for the rest of the summer.

The policy, though, is that extension of the workerships beyond the initial period is dependent upon the skill, enthusiasm, and interest of the students as well as availability of suitable work.

Select Right Boys

Each boy submitting an application for a workership is interviewed by the two agriculture teachers and the school principal. The top candidates for each workership available are interviewed by the appropriate donor. Completion of an application and participating in the interview are worthwhile vocational experiences in themselves.

Workership Outline

Santa Paula High School Director of Agriculture Gordon Woods emphasizes the importance of careful planning. He says that it is just as important for the farmer or agribusiness cooperator to have a "workership outline" as it is for the teacher to have a lesson plan.

This outline shows the jobs and skills in which the cooperator and the instructor agree the boy should gain experience while working. It also includes a schedule for accomplishing these jobs and skills. A section of the outline spells out the terms of the workership, the working day, the agreed-upon wages.

To keep this businesslike, it is appropriate to put these materials together in the form of a written agreement to be signed by the cooperator, the student, the teacher of agriculture, and the parent. Working instructions, or a check list of experiences, are fundamental and can contribute to keeping the activity on an educational rather than a flunky plane.

Dale W. Andrews is Associate Professor of Agricultural Education at California State Polytechnic College, San Luis Obispo, Calif.

Evaluation of the Program

Conscientious rating of each boy during and at the end of the workership is felt by Woods to be important to the success of the entire program. A form provides for a rating of aptitude for job, quantity of work, quality of work, attitude shown, and use and care of tools.

Woods makes it a point to solicit sincere appraisals from the cooperators. If they are a "white-wash" they are of little value to anyone, especially the boy. The completed reports are filed in the permanent record folder of each boy and it is anticipated that future use will be made of these when the agriculture department is asked by the boy or a potential employer for a reference.

Farm and Non-Farm Boys

Workership benefits are not limited to boys who don't have an opportunity for farm experience. One farmer dad said, "My son has been kept busy working for himself and for me but it might be good for him to listen to someone else give him instructions." Farm boys who have never worked anywhere except on the home farm without doubt will find it broadening to work for a while on another farm or for an agribusiness concern.

Working on a farm with enterprises not found on the home farm is obviously valuable. But even work on a farm with the same specialties has decided advantages; one of these is seeing how someone else does it.

Profitable for All

Workerships show real possibilities for strengthening the educational program of the terminal boy without a home farm. But benefits are not limited to on-the-job experience. There are agricultural occupation implications for every boy in the department. For example, it could contribute to making a study of agricultural occupations both functional and interesting. This year's sponsors of the workerships in Santa Paula were enthusiastic. All felt they got the $100 back in work because the boys selected were the cream of the student crop with agricultural leanings. Most important of all, though, is the opportunity which workerships provide for the boy to explore his interests and to evaluate his own abilities.

Just a New Slant

People in agricultural education have been talking about and conducting "work experience" and "placement for farm experience" programs for years. But, this workership approach is a little different slant and appears to have what it takes to add a little extra sparkle and glamour to a sound educational procedure which we know will work. End.

SPOTLIGHTING COMMUNICATION METHODS

by Gerald McKay

Kodak Returns Film Direct

Now you can mail your kodachrome film directly to any Kodak processing laboratory and have them returned directly to you by mail. This convenience is made possible by the recent introduction of a prepaid processing mailer. The mailer can be purchased from any Kodak dealer. You must buy the type of mailer which matches the kind and size of film you are sending, of course.

This service is available for kodachrome film in all the common sizes that ag leaders use, including motion pictures.

For More Effective Writing

"Use pointed examples" says Edgar Dale, noted educator. Many highly condensed articles can be simplified and clarified by inserting "for examples". These may include anecdotes, a more concrete explanation, an illustration which makes an abstract idea concrete. Lazy writers often say, "The reader will think of other examples." This usually means that the writer has run out of them himself.

And you can often substitute short, simple, vivid, easily understood words for the longer Latin or Greek equivalents. Instead of *confronting* problems, just *face* them. Don't *proceed* on the assumption. Just *assume*.

Color vs B & W Television

Work done by the Schwerin Research Corporation of New York indicated that color telecasts increase the effectiveness of certain commercials over their black and white versions by an average of 100 per cent.

While this research was in the field of commercial advertising, the findings were rather general and no doubt will have application to telecasts of an agricultural or homemaking nature.

To Improve Tape Recordings

Minnesota Mining and Manufacturing Company, makers of recording tape, suggest that you rewind tape once before using when it has been stored six months or longer. If the reels of recording tape are to be stored five years or longer, they should be sealed in movie-type film containers.

Transistor Record Player

A truly portable, flashlight battery operated three speed record player has recently been put on the market by Viewlex Incorporated of New York. It will accommodate both standard and long play records up to 12 inches in diameter. Two speakers combine to give the machine good tone quality.

The record player will play up to 6000 records using four size D flashlight batteries, according to the manufacturer. Weight of the machine is seven pounds and it measures 12 x 12 x 6 inches.

ANOTHER WAY to tell the public about one of your major events is through advertising on stamp cancellations. Obviously the occasion must be of considerable interest to a large number of people to make it worth while. Your local postmaster can get details regarding this means of communication for you. You can, of course, put a message on the outside of your envelopes with a rubber stamp which you can have made.

Do You Have Radio Stage Fright?

You're not alone if you do. Even the old time pros admit a certain amount of tension before they go on the air. Ray Wolf, farm radio director at the University of Minnesota, suggests that you think of your audience as a family sitting at the kitchen table listening to you as they eat breakfast, or your next door neighbor listening as he drives to work in his car.

The point is — you're not talking to a large group assembled in one room. It's just a family affair, so there's no reason for stage fright.

Disconnect the Projector Cords

When you finish showing a film or set of slides, disconnect the power and speaker cords from the machine. Better yet, gather up the cords and get them completely off the floor. This will prevent people in your audience from tripping over them and breaking the connections at one or both ends.

If you can't get the cords off the floor, at least disconnect them from the projector.

Watch Projector Cooling System

If your projector is to function properly, it must be well-cooled. A loose table cloth, napkins, or piece of paper pulled up against the machine by the fan can almost completely block air circulation and severely damage both the projector and visual material you are using.

A slipping fan blade or defective speed control switch will also cause little or no ventilation. In addition to other damage, overheating will materially decrease the life of your projector lamp. End.

These two speakers at SCSA sessions must have made a big hit. Anyway, they're apparently happy about it all. They are Howard A. Meyerhoff, Washington, D. C. (left), and A. D. Holmes, Gallion, Ala.

Soil Conservationists meet to discuss . . .

Land and Water for Tomorrow's Living

The 13th annual meeting of the SCSA was the largest ever. We've tried to capture a few highlights of the meeting for you.

● MORE THAN 1,200 conservationists wound their way through the hills of North Carolina to the scene of their 13th annual meeting in Asheville.

The largest group ever to attend the SCSA's annual meeting heard many experts discuss problems centered around the convention's theme — Land and Water for Tomorrow's Living.

In addition to speeches, panel discussions, and slide presentations, the group enjoyed looking at several conservation exhibits by SCSA chapters and commercial concerns. And, of course, the members will not forget the hospitality bar where such local products as apple cider, freshly dug peanuts, cigarettes, and fruit were plentiful and delicious.

But at this convention, as is the case with most conventions, one of the most valuable features was the free time where members got together and exchanged ideas. During intermissions, and all throughout the meeting, there was a continual hum of many small groups with intent discussions on a special topic all their own.

The convention got underway on Sunday afternoon, October 19, with an informal reception. The final session was a business luncheon on Wednesday, October 22. The time between these occasions was jam-packed with a well-organized program.

One of the most enjoyable half-days (despite foul weather) was a tour of the Biltmore Estate. This tour gave Society members the opportunity of seeing the "birthplace of forestry and cradle of conservation." What's more, they went through the Biltmore House, a fabulous mansion built by George W. Vanderbilt between 1890-1895.

A special program for ladies included a reception, several tours, a barbecue, special film showings, and free time for sight-seeing.

Officers of the Association pictured below are, front row, left to right, Elmer L. Sauer, Urbana, Ill., 1st vice president; Alvin C. Watson, Bryn Mawr, Pa., president; Howard F. Barrows, St. Augustine, Fla., treasurer; Russell G. Hill, East Lansing, Mich., past president; John W. Barnard, Washington, D. C., council member, northeast region. Second row, left to right, Harry M. Chambers, San Juan, Puerto Rico; Minott Silliman, Jr., Kankakee, Ill., council member; H. G. Bobst, Lincoln, Nebr., council member; Herbert A. Hopper, Lafayette, Calif.; council member; H. Wayne Pritchard, Des Moines, Ia., executive secretary.

Officers not pictured are: Walter C. Gumbel, Fairmont, W. Va., 2nd vice president; J. S. Russell, Des Moines, Ia., past president; A. H. Veazey, Raleigh, N. C., council member, southeast region; Firman E. Bear, New Brunswick, N. J.; Harold M. Rhodes, Morgantown, W. Va., council member.

Newly elected officers of the SCSA pose for a group picture at their annual meeting in Asheville, N. C. You'll find their names in the story above.

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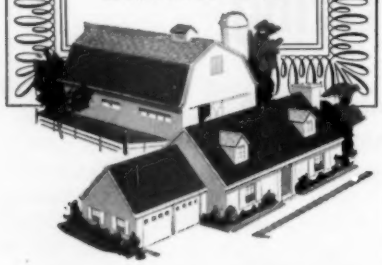

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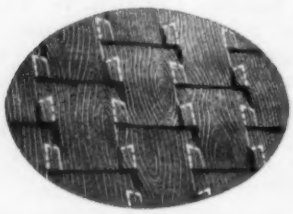
Protection in writing for roofs on homes or farm service buildings! Unique interlock design of Ruberoid Tite-Ons gives windproof safety even in hurricanes. Reason: every Tite-On is nailed to the roof itself *and* "locked" to other shingles around it. The result is a one-piece roof that has withstood the worst storms of the last 20 years on thousands of buildings. Tite-Ons assure striking roof beauty, too — create basketweave design in a range of handsome, modern colors to match any trim.



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Backed by Ruberoid's written Wind Warranty, Tite-Ons mean extra storm protection for every kind of home, barn or service building. For more information, see your nearest Ruberoid Building Materials dealer, or write The Ruberoid Co., 500 Fifth Avenue, New York 36, N. Y.

The RUBEROID Co.
ASPHALT AND ASBESTOS MATERIALS

Industrial Experience— Your Vo-Ag Classes?

Industrial experience— A way to improve the quality of instruction while spending your summers in industry

by Elmo S. Renoll

● AS A LEADER or teacher of students in Agriculture, are you doing the best job possible? Do you keep abreast of the current developments in your field? Do you continually strive for new methods and new experiences so that your teaching and leadership can be at its best? We who are teachers are continually confronted with these questions.

Improving the quality of our teaching can be done in many ways. As a teacher of students in Agricultural Engineering I have found one method that has shown great benefits is to gain working experience in your special field of instruction.

This is no new solution, but it is one that too few of our teachers use and the value of which too few of our teachers realize. Teaching from actual working experience can add something to your instructional program that cannot be gotten in any other way.

Work During Summer Months

Many teachers are employed for a nine or ten month term during the year. This leaves several months each year that could be devoted to a working experience in their major field of teaching.

Such an arrangement would also enable a teacher to fill his teaching responsibilities and at the same time gain current working experience to help him bring to his students the new ideas from industry.

During my summer employment in the field testing department of a major machinery company I have found many experiences that can be transmitted to my students in their Farm Machinery and the Farm Power Courses.

How Can It Improve

SUMMER WORK THAT PAYS!

As a teacher of students in agriculture, do you continually strive for new methods and experiences to keep your teaching leadership at its best? One way to do this is to take advantage of summer out-of-school time for professional improvement. Many teachers use this time for advanced study. The author of this article suggests using the summer months to get professional experience with an industrial concern. Actually, this would help the company as much as it would the ag teacher. Both would gain from learning the others viewpoint. We predict more of this cooperative education in the future. Investigate your chances of spending next summer working for some industrial organization. —Editor.

Students frequently ask questions about engineering materials, design conditions, testing techniques and other technical questions that I could not have answered had I not had an opportunity to gain experience in industry.

Engineering Organization

One of the important things that I gained from my experience is a better understanding of the engineering organization and its importance in the farm machinery industry.

As a result of this experience I can give my students a clearer picture of how the engineering section is organized in the farm machinery industry, starting with the chief engineer and following down to the engineering trainee.

I believe that I can now better answer their questions about engineering in the farm machinery industry and point up some of the responsibilities and problems that confront these engineers.

I can tell them something of the detail work they may do, I can point out to them that the chief engineer will expect an honest effort on their part but at the same time does not expect a recent graduate to have the judgement and ability of an experienced engineer. Help of this kind I would be unable to give to our students had I not had an opportunity to participate in the actual engineering program and see it in operation first hand.

Coordination and Cooperation

Another important item that I observed was the amount of coordination and cooperation necessary in order to have a smoothly functioning engineering section. Many agricultural engineering students have the idea that design engineers handle the entire problem by themselves.

After spending some time doing engineering and testing work in industry, I can point out the fallacy of such reasoning. I can indicate to them that to develop any new machine from the idea stage to the production stage is a long road requiring the help and cooperation of many people. They also must be made to realize that they will have to work with production men, the sales force, labor officials, laboratory testing persons, shop foremen, field test technicians, draftsmen and other groups.

The chief engineer and his associates must coordinate the efforts of the various engineering units so that they can work as efficiently as possible. My experience has given me a new determination to impress on our agricultural engineering students the importance of developing a cooperative attitude and the necessity of having to work with other people. This lesson our students need to learn well.

Training Program

Working in industry afforded me an opportunity to observe and become familiar with the training program for engineers in one farm machinery company. Many times in the past students have come to me with questions concerning typical training programs. The following are examples of the questions they ask. What will I be expected to know? Will I get any field testing experience? How much help can I expect from other engineers within the company?

These and many others are the kinds of questions that are continually being asked of teachers by graduating agricultural engineering students. While there are many things about engineering in industry that I do not know, I believe that I can now give the students some personal observations and information that I could not give them in the past.

I can show them in a truer picture how the training program works and how they will be guided and helped. Also I shall be able to tell them what some of their responsibilities as young engineers will be.

NEW FEED MEDICANT

DR. SALSBURY'S

TRISTAT®

For prevention and treatment of PULLORUM, FOWL TYPHOID, PARATYPHOID In Chickens and Turkeys

Now, Dr. Salsbury's Laboratories offers the poultry industry—Tristat—a new feed medicant that combats three important diseases . . . Pullorum, Fowl Typhoid and Paratyphoid.

Tristat has been thoroughly tested in the laboratory and in the field for safety and efficacy. The active ingredient of Tristat is 3, 5-dinitrobenzamide which has proven to be highly effective against a wide variety of Salmonella species.

Easily mixed in the feed, Tristat is available in 2 and 50 lb. sizes. Send for authoritative data that proves Tristat effective in combating Pullorum, Fowl Typhoid and Paratyphoid.

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- ☐ Tamworth Gilts
- ☐ Yorkshire Gilts

5c each, postage paid

BETTER FARMING METHODS
Sandstone Bldg., Mount Morris, Ill.

Gaining working experience in my major field of instruction also enables me to pass on to our students the importance of being able to follow an engineering idea or principle through to the finished machine. They must realize that engineers need ideas to work with in order to design machines.

Many of our students feel that creative thinking and playing with ideas and operating principles is for dreamers, not engineers. Industrial experience has shown me that engineers must have ideas and that they must be able to express these ideas so that their fellow workers fully understand them.

I have made an honest effort to impress on my students the importance of creative thinking and ideas.

Need for Changes

My summer experience has also prompted me to take a hard look at the material I am teaching and the way that I teach it. I have changed much of my teaching material and laboratory exercises to incorporate some of the material that industry considers important for engineering students.

One of the engineering reports in the Farm Machinery Testing course now is centered around creative thinking, ideas, and working principles. The student is asked to think through and develop the working ideas necessary to construct a farm machine to do a job not usually done by a machine. This kind of experience our engineers-to-be need to have.

Teachers can gain much industry know-how, develop new ideas, encounter new problems and get personal first-hand experience by working for industry during summer months or other times when given an opportunity. Coupling this industrial experience with their previous teaching experience will produce a better teacher and will in turn result in better-trained students. This summer time working experience has given me new inspiration and a new desire and determination to do the best teaching job possible. If you, as a teacher or agricultural leader, have an opportunity to gain such working experience, don't pass it up. You will be missing a wonderful opportunity to take your teaching out of the "also-ran" class, and putting it into the winning circle.

End.

For almost everyone in America today, the zest and excitement of holiday eating carry through the entire year . . . because the motor truck has revolutionized our distribution system to bring us daily deliveries of greater varieties of fresher, more nutritious foods *no matter where we live!*

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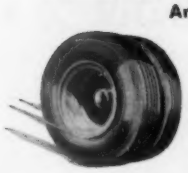

THE WHEELS THAT GO EVERYWHERE

ATA

(Advertisement)

Nature keeps equalizing the odds

A timely report from Merck to the growers of broiler and replacement flocks.

IN THE FIELD OF DISEASE, man has scored many triumphs over nature. Yet disease continues—for nature keeps fighting back, steadily and subtly, to equalize the odds against her.

In human medicine, for example, new antibiotics must constantly be developed as germs develop immunity to the old ones. Flies and mosquitoes regularly show fresh resistance to DDT. And...

For some time in our own poultry industry, we have been faced with novel strains of coccidia which eventually become resistant to even the best and newest of coccidiostats.

Coccidiostats in 1958

During 1958, four new products for the prevention of coccidiosis in broiler and replacement flocks were introduced to the industry. Among these was GLYCAMIDE, from Merck.

This proud companion to Merck's highly successful S.Q. and NICARB was not released until after premarketing tests on over two million birds. The testing of GLYCAMIDE was *more extensive* than for any other coccidiostat ever made.

Feed Manufacturers' Field Tests

Initial reports of Merck scientists were confirmed by laboratory and field trials conducted by research workers associated with feed manufacturers.

All findings indicated that GLYCAMIDE was the safest coccidiostat ever developed. It caused no ill effects on hatchability, fertility, or egg quality—even when accidentally fed to birds in production. Concurrently with suppressing outbreaks of coccidiosis, GLYCAMIDE permitted *maximum weight gains* and *feed conversions* within broiler flocks.

Coccidiosis Break-throughs

During 1958, however, many growers—regardless of their coccidiostat program—experienced outbreaks of coccidiosis. A number of the affected flocks were on rations containing GLYCAMIDE.

At the same time, a number of growers using GLYCAMIDE reported *no* coccidiosis, *plus* an improved picture of final weights, feed conversions and point spreads. (The use of GLYCAMIDE has resulted so far in most favorable weight gains.)

Factors Causing Break-throughs

What caused these breaks in areas that had previously reported little or no clinical coccidiosis? Evidence to date suggests the following:

- Certain coccidial species appear to have increased in virulence.
- New, resistant strains seem to be emerging, which are not affected by the action of coccidiostats.
- The unusually wet spring and summer probably led to more breaks, and more severe breaks.
- Large-volume poultry production and relaxed flock management may have resulted in conditions conducive to unusually high levels of coccidial oocysts in the litter.

No *one* factor has yet been identified which can explain *all* the breaks—not only in different parts of the country, but even on farms in the same community.

Examples of Break-throughs

In some areas weather led to excessively moist litter conditions which favored successful sporulation of an unusually large number of oocysts...

Eimeria acervulina and *E. maxima*, coccidial species heretofore considered unimportant in broiler flocks, either became more virulent or managed to infect flocks by sheer numbers...

E. tenella and *E. necatrix*, the most destructive coccidial species, developed unexpected resistance to GLYCAMIDE and other coccidiostats, but apparently more strains are susceptible to NICARB.

NOW THAT WINTER IS HERE, coccidiosis problems can logically be expected to decrease, providing an opportunity for calm and complete evaluation of the whole coccidiosis situation and for planning future courses of action.

Your feed supplier's service representative—the man most familiar with conditions in your area—can recommend one of three programs (outlined below) to aid in the prevention or control of the disease. His advice will be based on his personal knowledge of your farm, supported by current information reaching him from his company's research teams and from Merck.

Prevention Programs

IN ADJUSTING YOUR COCCIDIOSTAT SCHEDULE, rely on the advice of your feed supplier or his serviceman with these products:

S.Q.—the most effective drug for the prevention or control of coccidiosis in turkeys. Also for controlling outbreaks in unprotected flocks—where feed intake has been lowered due to disease or stress conditions—or where break-throughs occur from uncommon species of coccidia.

NICARB—for maximum protection...tried, tested and proved in over 3 billion birds. Now widely used with broilers and with replacement pullets, where there is no problem of accidental feeding to birds in production.

GLYCAMIDE—best tolerated and highly efficient in permitting top weight gains and feed efficiency in broilers and replacements.

As stated above, your feed supplier's representative will help you decide which of these programs best suits your farm.

Science, Service and Surety

Remember...your feed manufacturer and his dealers provide services unmatched in any other branch of our agricultural economy.

Available to you, as an important part of that service, is the latest information on new findings in nutrition and on the testing of new drugs, which aid in preventing or controlling poultry diseases, including coccidiosis. This information is drawn from extensive field and laboratory experiments. Scientists of the Merck Research Laboratories are continuing to develop, for your feed manufacturer, the most up-to-date and comprehensive information from extensive laboratory experiments and field trials.

The information your feed supplier gives you is *sound*. The feeds he offers you, together with the drugs they contain, are carefully formulated and expertly blended to help your flock and your business to grow and prosper.

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Proof that you can

GET MORE MILEAGE

from your

ANNUAL REPORT

by Phillip J. Tichenor

THE STORY IN BRIEF:

How to get better use of annual reports is a problem that bothers many agricultural leaders. Here's how two Minnesota county agents solved this problem:

In Lake of the Woods county, Robert Ascheman helped the editor of the local weekly paper develop a special edition. But instead of carrying the usual news, the edition was titled: Extension Hi-Lites of 1957. Eight pages told the Extension story of Lake of the Woods county.

County Agent David S. Johnson of Yellow Medicine county used a similar technique to get wide distribution of his annual report. His publication grew out of a series of five articles from the narrative section of his annual report.

● TWO MINNESOTA COUNTY agents found a better way to get the "Extension Story" to more farmers in the country last year.

While they went about it in different ways, here's what they did: Each one helped a local editor put together a special publication which served both as the agent's annual report and as something to give the local readers a better look at the county Extension program.

The two agents were David S. Johnson, Yellow Medicine county, and Robert Ascheman, Lake of the Woods county.

Johnson's publication grew out of a series of five articles that made up the narrative of his annual report. He originally planned the series for use over a five-week period in the county's weekly papers. The article topics:

- Report on Extension Office Activities
- Research Information
- Progress in the Home
- 4-H Program Results
- Research Aids in Extension Program

Three papers carried the series.

When the Granite Falls Tribune ran the articles, the editor saved the type galleys for each story. He later set the type into an 8½ by 11-inch format, made up an attractive blue and pink cover, and printed 500 copies of the four-page publication. The editor charged the extension office only $30 — just enough to pay the press costs.

Johnson then distributed the report to Extension cooperators through the mail, at meetings, in personal visits, and made them available at the local office. He conducted a survey of persons receiving his report. Of those who answered, some 94 percent had read the series when published in the county papers. Eighty-nine percent said the articles made them better acquainted with Extension work.

In Lake of the Woods county, Agent Ascheman helped the editor of the Williams Northern Light develop a special edition of the paper using the regular format. But instead of using the paper's usual logotype, the edition was titled "Extension Hi-Lites of 1957." It ran eight

pages and covered a variety of topics:

- Extension Contacts 10,000 People
- Farm Families Help Plan Extension Program
- What's the Potato Marketing Situation?
- Potato Growers Given Assistance
- One Hundred Percent Increase in Soil Testing
- Livestock Shipping Association Re-organized

The only statistical part of this publication was a brief summary of Extension contacts, on the front page. Another front page article gave a tightly-written, overall summary of the country's agricultural characteristics, markets, climate and general problems.

Starting at the upper right of the front page was Ascheman's personal news column heading, "Robert's Ramblings." This column had appeared regularly in the paper during the previous year. Clippings from past issues actually supplied much of the information from which Ascheman wrote the report.

In another front-page feature, Ascheman wrote about "John Doe's Farm," in which he described, based on census averages, what the average Lake of the Woods county farm would be like in land, buildings, investment, home conveniences, and income. Pictures and maps illustrated different aspects of the year's work. On the back page, a 4-H calendar gave a capsule summary of club activities during the previous 12 months.

This edition meant no cost to the Lake of the Woods county Extension office; enough local advertising was sold to pay for the printing and distribution.

Some 900 copies of this publication were printed and mailed to rural boxholders, local businessmen, Extension workers and legislative representatives. This way, a copy went into every farm home in the county. Comments from local farmers getting the publication were encouraging: "This helped point out many things people didn't know you were doing," one person said. From another: "The report has tremendous public relations value in explaining the nature and scope of Extension work." And a third: "I can't think of anything that would provide more food for thought among farmers and businessmen of the county."

Ascheman himself says, "Although the project required extra work, It was well worth it. I've certainly gained an insight into the problems facing a small town editor in getting out his weekly paper." End.

EXTENSION HI-LITES
OF 1957
In Lake of the Woods County

Extension Contacts Over 10,000 People During the Past Year

Introduction

John Doe's Farm . . .

Agent Ascheman's annual report.

Thank You . . .

Better Farming Methods readers, once again you have turned in a strong preference vote for BFM as the most helpful publication in this field. *The vote is 2½ to 1 over any other publication.*

We had Recording and Statistical Corp., Chicago, mail a post card questionnaire to 1,526 readers of **Better Farming Methods.** More than 74% of the post cards were returned.

Those of you who receive the three leading publications in this field, in answer to the question, "What magazine do you find most helpful?", voted 2½ to 1 for **Better Farming Methods.**

This is the seventh reader preference survey **Better Farming Methods** has had made among its readers. Each one has shown a wide preference for **Better Farming Methods.**

This is a most encouraging vote of confidence in our editorial program. It is dedicated to the one objective of making this your professional magazine . . . to help you by presenting various techniques and methods which will enable you to transmit (communicate) more successfully to farmers information which will aid them with their farming practices.

Although we review the latest research findings, it is not our purpose to give you the kind of information which you can obtain in the national and regional, also state, farm publications. Our principal purpose is to show you *how you can influence farmers* to adopt new farming methods and practices that will provide happy, profitable farm living.

So, you may continue to turn to **Better Farming Methods** each month in confidence that it truly is your professional magazine to help you *train* and *advise* farmers. The more successful you are as a communicator, the more resultful your employment will be and the greater will be your happiness on the job.

Frank Waddle
Editor
Better Farming Methods

THE

● WORKERS IN THE Cooperative Extension Service are known to be busy, and dedicated to their jobs and to the people they serve.

Why, then, do we have such difficulty in justifying what we do to county governing boards, state legislatures, and the United States Congress?

Why is it that we rarely drop any of the activities which are a part of our programs, even though we add new activities?

Why is it that county agents have the reputation of being among the busiest people in the county, but when faced with the question, "What have you accomplished?", they are often at a loss for an answer?

Why is it that the question, "Why?" is so rarely asked of Home Demonstration Specialists, or 4-H club agents, or county agricultural agents?

May I suggest that the answer to all these "why" questions is tied up with a basic confusion over ends and means in Cooperative Extension Work. As we look at the great number of activities in which Extension workers take part, we could ask about each one:

"Is it an end, or is it a means to something else?"

- The noon-time radio program to which we rush daily – do we do it for its own sake, or because it is a means to some other goal or objective?

- The Home Demonstration Unit organization – do we keep it going because it, in itself, is our goal; or is it a means to something else?

- The weekly newspaper columns – do we write them because we are committed to write them each week, or are we using them as a way of achieving some other objective?

- Our annual plan of work – do we go through the motions on it because we are required to do so by a certain date each year, or does it help our total effort in some way?

Are these things means by which we accomplish certain program ends, or goals, or are these things ends in themselves?

The confusion between ends and means is not the fault of the individual Extension worker. Don't we all have difficulty in stating the ultimate objectives of Cooperative Extension Work? Is it to help people help themselves? Help themselves to what? Is it to help people identify and solve their own problems? Is it to improve rural economic standards? Why? Is it to build better citizens for the future? Sure, but so is the goal of most other government and educational organizations.

Just What Is Our Objective

We seem to be agreed in the Cooperative Extension Service that our business is education. Perhaps we'll have to be satisfied with John Dewey's statement that the end product of all education is the capacity for more education.

One reason for the dilemma is that Public Law 83 of the 83rd Congress, and the Smith-Lever Law before it, do not state ultimate goals or objectives for the Extension Service. They do give us a reason for being. It is "In order to aid in diffusing among the people of the United States useful and practical information on subjects relating to agriculture and home economics, and to encourage the application of the same . . . "

But is this an end, or is it merely a statement of means? Perhaps the law tells us that our end, or basic goal, is to carry out the process of education. *We're not doing this to save the soil for future generations. We're not doing it to defend the country against foreign enemies. We're doing it for its own sake.*

If this does not seem like a legitimate reason for being, it may be because ends and means are never clearly separated in this life. Instead, they are always fuzzy. Every end is also a means to something else. And every means may be the end if looked at before it is employed.

Too often we evaluate our Extension programs on the basis of the means used, rather than the ends achieved. Our monthly and annual reports force this kind of measurement. It is like the insurance salesman who reports how many phone calls he makes, how many letters he writes, and to how many groups he has spoken. What the sales manager wants to know is how many policies he has sold. Only by judging the extent to which he has achieved this end can his success be evaluated.

How Can We Evaluate?

We, too, report phone calls and letters. And agents take great pride in telling each other how busy they

EXTENSION AGENT'S DILEMMA

by George H. Axinn
Cooperative Extension Service
Michigan State University

Are Extension workers confused over the ends and means of their work? Can they really be separated? How can the Extension program be integrated to fit certain needs?

Why do Extension workers have difficulty explaining what they have accomplished? Why is it that county agents have a reputation of being among the busiest people in the county, but when faced with this question they are often at a loss for an answer?

These are just a few of the "If's" raised in this thought-provoking article on the "Ends and Means" in Extension work. The author suggests confusion over ends and means is responsible for the basic confusion over the answers to many questions. No matter what your job as an agricultural leader, you'll find this article interesting, for there's confusion over means and ends in all types of professional agricultural work.

have been, how many night meetings they have attended, and in how many other activities they have taken part. It is almost as if "busyness" had the same meaning for us as success. Without clear program goals, with a clear understanding of the ends of a county Extension program, it is difficult to evaluate anything except the means we use.

Confusion Between Ends and Means

The confusion between ends and means is not limited to our use of each means as organized groups, circular letters, radio programs, and 4-H projects. The numerous contests we run, the advisory groups we organize, our processes of program development, and the very organization of our county, district, state, and federal staffs is subject to the fuzzy fixing of ends and means.

In planning a program, we hope to be influenced by the felt needs of the people. One way to do this is to form committees of representative people and seek their advice. To do this well, we would have to train them in giving advice, help them obtain the basic information upon which to give advice, and then develop some sense of confidence in their own abiiity to give sound advice. Because the advisory committee may be seen as an end in itself, rather than a means to the end of a program based on needs, these steps are rarely carried out.

There are other ways of achieving a program balanced with the needs of the people being served. We could run surveys of the county, or we could just do a good job of listening to the people talk. This method might result in a better program than the advisory committee system. As long as means and ends remain confused, the hundred other ways in which a program might be developed will never be tried.

An Integrated Approach

Confusion of ends with means has also kept Extension staffs from becoming integrated. If we try to integrate our means, we may find the total county staff continually riding in one large station wagon. Only when we unify the ends of a county program can we develop the kind of an integrated approach which will increase our value to the people we serve.

To separate ends from means is not easy. But it can help a county Extension staff keep its program flexible

and tuned to the rapidly changing needs of the people in the county. It makes it possible for all members of a county team to be helping to achieve one major set of goals.

We will not be able to do it if we are afraid to make changes. Like turtles, we may not be going anywhere if we don't stick our necks out! Remember, Babe Ruth, during most of the period in which he held baseball's home-run record, also held the strike-out record. If we are not willing to risk a strike-out, we may never hit a home-run. It is worth a try. To separate means from ends will allow you to change both ends and means as conditions in the county change.

Let's not be like the church planning group whose minister summed up their session by saying:

> "All our fathers have been churchmen
> Since 1900 years ago
> And to every new suggestion
> They have always answered, 'No!' "

The extent to which a clear statement of the ends of a program is understood by those who will carry it out tends to be related to the extent to which those ends will be achieved. That is to say, success in carrying out Extension programs is related to our ability to separate ends and means, and to clearly understand our goals. End.

COMING EVENTS

November 30-December 4 — National 4-H Club Congress, Chicago, Ill. Contact Norman Mindrum, director, National Committee on Boys and Girls Club Work, Inc., 59 E. Van Buren St., Chicago 5, Ill.

November 30-December 7 — National Livestock Exposition, International Amphitheater, Chicago.

December 1-3 — Annual Meeting, National Association of County Club Agents, Conrad Hilton Hotel, Chicago.

December 3-5 — Annual Convention of the Agricultural Ammonia Institute, Chicago. Contact Jack F. Criswell, executive vice president, Agricultural Ammonia Institute, 304 Claridge Hotel, Memphis, Tenn.

December 7-11 — National Junior Vegetable Growers Convention, Biloxi, Miss.

December 17-18 — 1958 Beltwide Cotton Production Conference, Rice Hotel, Houston, Tex. Contact National Cotton Council, P. O. Box 9905, Memphis 12, Tenn.

January 7-9, 1959 — Thirteenth Annual Meeting of the Northeastern Weed Control Conference, Hotel New Yorker, New York City. Contact E. R. Marshall, chairman, public relations committee, Northeastern Weed Control Conference, Union Carbide Research Farm, Clayton, N. C.

February 15-21, 1959 — Longhorn Recreation Laboratory, Glen Lake Camp, Glen Rose, Tex. Contact Mrs. Mozelle Killingsworth, president, Paducah, Tex.

March 19-20, 1959 — 1959 University of Maryland Nutrition Conference for Feed Manufacturers, Shoreham Hotel, 2500 Calvert, N. W., Washington, D. C. Contact Richard D. Creek, chairman, Nutrition Conference, University of Maryland, College Park.

Help Fight TB

Buy Christmas Seals

Ideas That Work

Check List of Jobs for the Coming Year

Following our State Summer Ag Conference, I made out a check list of "Ideas or Jobs for the Coming Year." We all come home from these conferences brimming with ideas and new classroom or shop procedures, but many are forgotten before they are put into use during the school year.

I refer to this list on a weekly or bi-monthly basis and check off the ideas or jobs which I have completed. I am using it for the second year and feel it is very helpful and well worth the time spent in making out the check sheet and using it.—*Leonard J. DeBoer, vo-ag instructor, Chamberlain, S. D.*

Colors Help Identify Grease Fittings

I noticed that one of our local farmers painted his grease zerks in three different colors on a new cornpicker.

When asked about the reason for this, he explained that he painted them different colors because of the frequency which they were to be serviced. He painted all those that were to be greased every half day red, those to be greased every day yellow, and those to be greased every week green. It helps him and he recommended it to other farmers.—*Jim Hamilton, vo-ag instructor, Audubon, Ia.*

Do you have an idea that works? Better Farming Methods will pay a minimum of $5 for accepted ideas or teaching techniques that you have used successfully in YOUR work with FFA, 4-H, or farmers.

VISUAL AIDS

FROM THIS LAND, 16 mm., sound, color, 15 minutes. Available from Association Films, Inc., Broad at Elm, Ridgefield, N. J.

This quarter-hour film shows how conservation, modern farming techniques, crop rotation, science, and mechanized heavy-duty equipment have contributed to the abundance that comes "From This Land". The theme of the film is that industry is teamed with agriculture to the benefit of all, and that the people of America are reaping the harvest the mechanization has brought about. The sponsor of this film, Firestone Tire & Rubber Company, presents this film as part of their informational service.

LOOSE HOUSING, 16 mm., sound, color. Available from Film Distribution Center, United States Steel Corporation, 525 William Penn Place, Pittsburgh 30, Pa.

This color film features the dairy arrangement of a central New York dairy farmer who erected a modern dairy barn layout after his buildings were destroyed by fire. This film begins with a fire scene, and continues through planning, construction, operation, and use of new pressure-creosoted pole type buildings and other equipment. More than 6,000 people have visited this new dairy building layout since its completion a year ago. The farm layout features an indoor box silo as an integral part of the feeding barn plan.

FOR THE BIRDS, 16 mm., sound, color, 13½ minutes. Available from Modern Talking Picture Services, Inc., 3 East 54th St., New York 22, N. Y.; 216 E. Superior St., Chicago 11, Ill.; 2400 W. Seventh St., Los Angeles 57, Calif.

This film tells in interesting fashion a story of how and where a typical research project begins, laboratory and field testing procedures, writing and presenting a report to a scientific group, and steps by which the results of research are put to work on the farm. Several nationally-known scientists play key roles in this movie sponsored by Hess & Clark, Inc. Included with the film is a free educational kit consisting of a lecture outline, student lesson sheets, and quiz sheets.

KEEP AMERICA GROWING . . . QUALITY FOOD AND FIBER, 16 mm., sound, color, 30 minutes. Available from California Spray-Chemical Corporation, Richmond, Calif.

"Keep America Growing . . . Quality Food and Fiber" is a report on American agriculture, and shows how growers and technical fieldmen team up to meet the growing demand for top-quality produce. The film includes interesting close-ups of many insects and plant diseases, and in addition, dramatic time-lapse photography documents the importance of treating seed to protect against insects and diseases.

TRANQUILIZERS—A NEW IDEA IN ANIMAL FEEDS, 16 mm., sound, color, 14 minutes. Available from Farm Film Foundation, 1731 Eye St., N. W., Washington, D. C.

This movie reviews years of research showing how tranquilizers were tested on small animals. The film pinpoints some of the many ways in which tranquilizer drugs, already so widely used by humans, may be a boon to farmers. The film is sponsored by Chas. Pfizer & Company, Inc.

THESE FILMS ARE LISTED AS A SERVICE TO OUR READERS. ALL FILMS ARE FREE EXCEPT FOR TRANSPORTATION COSTS. ORDER THEM FOR USE IN YOUR WORK.

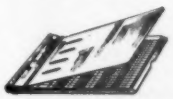
NASCO news
TIPS FOR BETTER TEACHING

Internal Organs of Farm Animals

For teaching the principal organs of animals, a good chart is unsurpassed. NASCO is offering a series of four charts in full color, and 30 by 40 inches in size showing the internal organs of cattle, sheep, hogs and chickens. The principal organs which every student should know are outlined in bold names. Scientific words and confusing detail are not used.

You'll find these charts described on page 65 of the current catalog, No. 45.

Another Use For Inseminators' Receipt Books



The aluminum-covered, spring-clip books shown on page 112 are very effective for holding student judging cards, score sheets, and other types of information sheets. Originally intended for inseminators' receipts, these versatile metal covers have many other applications. They are 5½ by 8½ inches in size and made of lightweight aluminum. Price is $3.85.

Cod Liver Oil For Winter Rations

In teaching feeding or in planning winter rations, don't forget vitamins A and D. A convenient way to get these two vitamins is in cod liver oil. You can buy five pounds of high-potency oil for less than $3. It should be mixed with the feed just prior to the time of feeding in order to retain its greatest effectiveness. Cod liver oil is listed on page 138.

Roll-Up Blackboard Is Easy to Carry

A blackboard should be available for every meeting you have, whether it's in a classroom, town hall or a home. If you find it necessary to carry your own, the NASCO roll-up cloth blackboard is just what you want. It is 36 inches high, 48 inches wide and surfaced on both sides.

As a rule, the width of your blackboard should be no less than one-sixth the distance from it to the back row of students. This NASCO board will easily accommodate a group in an ordinary classroom. If you have meetings in a large auditorium or town hall, get two of these roll-up blackboards. They are easy to carry and weigh less than three pounds. More details are on page 72 of the catalog.

Use Railroad Board For Posters

Railroad board is made specially for colored posters and charts. It comes in 12 colors and is 22 by 28 inches in size. Four-ply weight sells for 17c a sheet.

With this cardboard and die-cut letters or magic marker pens, you can make attractive posters and charts in color with a minimum of effort.

Poster board 28 by 44 inches in size and made of 14-ply material is also available in nine standard colors. You should have a couple of sheets of each color on hand for emergency use. Both sizes are described on page 77 of the NASCO catalog.

If you haven't received NASCO Catalog No. 45, write today for your free copy.

NASCO FORT ATKINSON WISCONSIN

HELPFUL BOOKLETS

HOW TO ORDER

1. **SELECT the booklets you want**
2. **CIRCLE the corresponding number on the postal card**
3. **FILL IN your name and address**
4. **MAIL CARD—no postage needed**

67—Anhydrous Ammonia Applicaton

A helpful booklet from Olin-Mathieson Chemical Company tells how to fit disc and moldboard plows to apply anhydrous ammonia. They'd be happy to send you a free copy.

68—Portable Plastic Silos

The Bakelite Company would like you to send for a copy of their booklet "Reap Larger Profits With Bakelite Silos". You'll get many helpful hints from this booklet.

69—LPG and You

What is LP-Gas? How is it produced? These questions and many more are answered in easy-to-understand fashion in a new booklet, "LPG and You", available from Marvel-Schebler. Circle the postal card number above to get your free copy.

70—Welding Supplies

A new 52-page welding supplies and accessories catalog is available free to ag leaders from Air Reduction Sales Company. Why not order your copy today?

71—Making Better Silage

"Tips On Making Better Silage" is the title of a little booklet from Trojan Powder Company. Send for your free copy.

72—Handling Barnyard Manure

New Idea Farm Equipment Company invites you to send for a free copy of their informative booklet on tried and new ideas for handling barnyard manure.

73—Picker-Sheller System

A booklet from Deere & Company describes ways to harvest, dry, and store corn with a modern picker-sheller system.

74—Poultry Coccidiostat

A booklet describing coccidiosis and the effectiveness of Trithiadol in preventing this major poultry disease is offered free to ag leaders by Sterwin Chemicals, Inc. Send for your free copy today.

75—Protect Pork Profits

A three-color hog health handbook is just off the press. It has been prepared by Dr. Salsbury's Laboratories. They'd be happy to send you a free copy.

76—Booklet of the Month

A well-illustrated 24-page book from Republic Steel gives a fine collection of fence-building facts. Sections include removing old fence, erecting corner posts, setting and stretching the fence, attaching the barbed wire, temporary fencing, contour fencing, and safety practices in fencing. Be sure and order a copy of this helpful booklet for your files.

77—Pipeline Milker

"Now is the time to think about a pipeline milker . . . ," say authorities in a booklet from Babson Bros. Company. Order your copy today.

78—Audio-Visual Lighting

A survey of audio-visual educators on the question, "How dark should audio-visual rooms be?" is the theme of a helpful booklet from Levolor Lorentzen, Inc.

79—Chemicals Handbook

A booklet from Dow Chemical Company lists their chemicals and their uses. This is a very good booklet.

80—Utility Tractors

A colorful booklet from Allis-Chalmers explains how farmers can make more money with utility tractors. Send for your copy of this excellent booklet.

81—Home Improvement Guide

A new home improvement guide is offered free to ag leaders by Masonite Corporation. The 24-page guide gives thumbnail sketches from 33 free fix-up and modernization plans.

82—Triangle Projectors

For complete information about professional two-in-one 16 mm. sound projectors, circle the postal card number above. Triangle Projectors, Inc., will send you their informative literature.

83—Dairy Promotion Program

"The Dairy Farmer Goes To Markets" is the title of a booklet available free to ag leaders from American Dairy Association. It explains their operation as a non-brand sales promotion program on behalf of dairy farmers.

84—Keep Pole Barns Bright

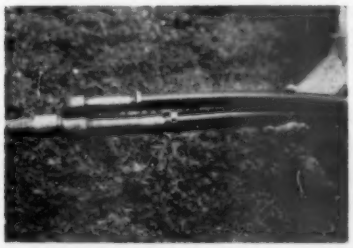
Transluscent fiberglass plastic panels are being used as skylights in all kinds of agricultural buildings. You can get more information about the use of these materials by circling the postal card number above. Filon Plastics Corporation will be happy to send you free literature.

85—"Power" Booklet

Continental Motors Corporation would

like you to have a free copy of their booklet listing a complete line of Red Seal engines. Order your copy today.

86—High Pressure Plastic



The Allied Chemical Company would be pleased to send you further information about high pressure Orangeburg plastic pipe which is ideal for deep and shallow well use. Circle the postal card number above.

87—Plastic Greenhouses

A brochure on polyethylene plastic greenhouses contains many pertinent facts from poly's researchers. Gering Products, Inc., would like to send you a free copy of this booklet.

88—Plastic Pipe Facts

The Eastman Chemical Products, Inc., has collected many facts in this helpful booklet about characteristics and uses of polyethylene pipe in cold water installations. Send for a copy of their helpful booklet about flexible pipe made of Tenite polyethylene.

89—Herring Bone Milking System

The principles of the herring bone system are explained in a booklet available free from Farmer Feeder Company. Order your free copy right away.

90—Yield Calculator

A pocket-size notebook from Funk Bros. Company tells how to calculate yields, bushels in the crib, number of plants per acre, etc. Many other interesting facts are included. Send for your free copy.

91—Making Windrows

A helpful booklet from Lilliston Implement Company tells how to prepare windrows for mechanical harvesting. Order your free copy by circling the postal card number above.

92—Gibrel on Truck Crops

For the complete story on the use of Gibrel on truck crops, you will want a copy of this booklet from Merck & Co., Inc. They'll be happy to send you a free copy.

93—Audio-Visual Folder

A folder of audio-visual materials is available free to agricultural leaders from Radiant Manufacturing Corporation. Order your copy.

94—Plow Trash Under

For a free booklet on how to bury trash as you plow, send for this helpful booklet from Sherman Products, Inc.

95—Hog House Plans

For complete plans of hog houses and equipment, send for this booklet from Weyerhaeuser Sales Company.

96—Handle Pesticides Safely

You can learn how to handle toxic pesticides safely from this helpful booklet from Ray-O-Vac Company. Order your copy today.

97—Automatic Still Camera

A revolutionary development in photography is this completely automatic electric eye still camera. Its developers, Bell & Howell Company, will send you free information about this automatic exposure camera if you will circle the postal card number above.

98—Quality Control Tests

A colorful booklet from Eastman Chemical Products, "Quality Control — A Company's Conscience At Work", includes numerous photographs in full color that explain the operations of a quality control laboratory. Send for your free copy of this booklet.

99—Grain Aeration System

The features of a complete grain aeration system are explained in detail in a helpful booklet available free to agricultural leaders from Douglas Chemical Company. They'd be happy to send you a free copy.

100—This new heavy duty tillage tool that plows, discs, harrows and mulches during one trip through the field has just been announced by Winpower Manufacturing Company. Circle the number above to get more information.

101—Vertical Mulching

What is vertical mulching? You'll find the answer to this and many other questions in a helpful brochure from M and W. Order your copy of this booklet that explains the new dimension in soil and water conservation.

102—Sealing Farm Buildings

An instructive booklet, "Engineered Filler Strips for Sealing Farm Buildings" is now available to ag leaders from the Asphalt Corporation of America. Get your copy by circling the postal card number above.

103—Tin Fungicide

The quarterly journal of the Tin Research Institute, Inc., contains an interesting article on tin as a crop fungicide. Get your free copy of this journal by circling the postal card number above.

104—Power Tool Guide

A new 12-page guide describing 14 popular electric tools is offered free to ag leaders by Porter-Cable Machine Company. Send for your copy.

105—Lightning Facts

A brochure from Lightning Protection Institute gives many details about lightning and what you can do about it. Send for your free copy of this helpful booklet.

106—Feed Supplement

A helpful booklet available free to agricultural leaders from Heterochemical Corporation explains the use of vitamin K as a supplement for animal feeds. Order your copy of this booklet.

first things first

How well we keep the world's *peace* depends first on how well we keep the world's *people.*

If great injustices, if inequalities in health, food or education exist anywhere... we all face a constant threat to peace.

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UN

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SELL YOUR IDEAS WITH FARM RADIO PROGRAMS

How well do you know radio, radio men, and radio writing?

THE STORY IN BRIEF:

Ag leaders are missing a good bet if they aren't using radio to help get information to farmers. Chances are, the local radio station would welcome information on agriculture of the area. And, it's easier than you think to keep them supplied with this information.

But don't expect the radio station to use the same news items that you send to the newspaper — that is, unless you have written the item with radio in mind. When writing material for use on radio, remember to keep sentences short and easy to understand. Be brief.

PART I

by David H. Grover

● HAVE YOU BEEN OVERLOOKING your local radio station when conducting an information campaign? Many county agents, vocational agriculture teachers, and extension workers don't realize that the radio station in their community is not only willing but anxious to utilize news of agriculture in that area.

If you haven't gotten acquainted yet with the radio people in your area, stop by the station and introduce yourself to the program director or manager. After talking for a while you'll discover that you're in a position to help him and he's in a position to help you. He needs interesting local program material — and what's more interesting and important to your community than agriculture! You need a way to get your information to farm families, and radio has demonstrated its ability to do just that!

There are some things you need to know about radio, however, before you can carry out your part of this mutually attractive arrangement.

While you're still at the station take a look around you. If this station is a typical 250-watt small town operation, you'll probably notice that only two or three people are needed to keep the station on the air. And if you watch for a while you'll discover that here there's no such word as rehearsal. Everyone is so busy that there just isn't time to put together programs that require a lot of planning and special preparation.

This should be your first clue to getting along well with the radio station. If you can supply the radio men with interesting information that is simple and easy to handle with a minimum of preparation, you're going to find them eager to use your materials.

At the station you may have noticed how quickly

a news, sports, or farm show can be put together in the newsroom. National and international stories are generally well reported on small stations because the announcer can take a complete newscast off the United Press, International or Associated Press teletype any hour of the day or night.

On the other hand, most small stations aren't in a position to spend much time or money on local news, either agricultural or general. As a result, the local news simply isn't developed by the station nearly as fully as it might be.

You Can Help Station

Here's where you can step in and supply the local station with lots of information on what's going on in your area. Not only are you helping the station improve its news coverage and local programming, but you're doing a better job of carrying out your own mission: getting information successfully through to your farm public.

Incidentally, there's another way you can help the local station. In most areas of the country many different market reports appear on the wire services, and the station may need some guidance in knowing what to use. For example, in the western Great Plains area a station may find livestock market reports on the wire from as far east as Indianapolis and as far west as Ogden, with perhaps a half dozen in between. There isn't time — or the need — for the station to report all of them on its farm shows. You can suggest which ones are the most important to the livestock producers in your area.

An on-the-spot recording helps to create realism for radio.

You can do the same for commodity market reports. Maybe you, as a Corn Belter, have been amused to hear a local announcer reporting the Memphis cotton market. Radio men move around a lot, and may not realize what the important crops are in a given area. A few suggestions from you on what to include in market reports could help both the station and your listeners.

Public Service Announcements

There's one other thing that you should understand about radio. Radio stations, unlike newspapers, are licensed by a federal regulatory agency, the Federal Communications Commission. The FCC requires that each station carry out a public service responsibility to its community. A new station, getting its first license, must explain just how it plans to serve the community; every three years when the license is renewed the station must show what has actually been done along these lines.

This public service responsibility means several things to the local station. Some non-commercial programming must be presented, such as information and public affairs broadcasting. Ownership of the station should be in local hands, wherever possible. And stations must not simply plug into a network during the entire broadcast day, thus avoiding the job of originating local programs.

So there is considerable pressure

YOU CAN BUILD THIS PORTABLE WELDING SHIELD

A lightweight, portable welding shield, which may be used for either arc or gas welding demonstrations, has increased the effectiveness of welding instruction at Centralia High School and Junior College in Centralia, Wash.

Inexpensive and easy to construct, the shield enables 10 to 12 students to watch the demonstration without goggles or helmet. From the instructor's standpoint, it is advantageous to have the students in front of him, instead of looking over his shoulder.

The materials required to build the shield are: Eight feet of 1½-inch light tubing; 7 feet of ⅞-inch tubing; 11 feet 8 inches of ¾ x ¾ x ⅛-inch angle iron; 2 sheets of double-strength glass, 20 inches by 50 inches, and a sheet of 20-inch by 50-inch special plastic welding screen available through The Lincoln Electric Company. The screen was made and is used by Hugh Kintzley, agriculture instructor at Centralia High School, Centralia, Wash.

on the station to use the kind of localized agricultural news and information which you can provide. But remember, even though this obligation exists, you can't walk into the station and demand that certain information be carried, or that your programs be aired at a certain time. Tact and courtesy are always necessary in dealing with any media of communication, regardless of whether it's the radio station with a *legal* responsibility toward public service or the newspaper with only an *implied* responsibility. Use that same common sense that you employ in handling your daily contacts with farmers, and you can't go wrong.

Two Ways to Do Radio

Now that you've gotten acquainted with the radio station and its problems, let's look at the big job ahead: Getting information to the public. You can do this via radio two ways. You can present it yourself on a regular basis, either live or tape-recorded, or you can write it up as a news release and send it to the station.

You'll probably get better results if you do your own program, preferably during the noon hour or early morning period. But if the demands on your time are terrific, then you may not have the time available to properly plan and present a regularly scheduled program. It might work out just as well if you can write up your activities for distribution to the radio stations and newspapers in your area. Then the stations can handle them any way they want to, using regular announcers or farm directors as the case may be.

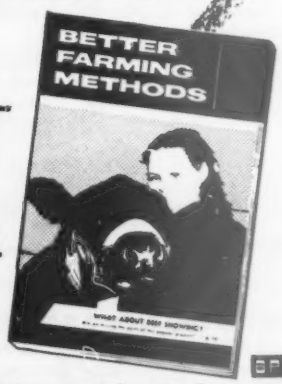
You may be wondering what kind of things you should write up for the radio station. The answer is anything that will interest or affect your farm listeners.

There are many types of information which could be developed for use on the radio. But these things just mentioned should give you some idea of how to solve your first problem, *what* to write for radio. The second problem, *how* to write for radio, still lies ahead.

Next month, we'll present Part II of this farm radio discussion with pointers that will help you make radio easy, interesting, and effective.—Editor

What's Ahead in AG CHEMICALS?

LOOK IN
January BETTER
FARMING METHODS



INFORMATION ABOUT NEW PRODUCTS AND METHODS WILL HELP AG LEADERS TRAIN AND ADVISE FARMERS BETTER

Herbicides, pesticides, fungicides, antibiotics, growth stimulators, and other chemical and biological products have become vitally important tools on farms and ranches throughout America. Yet the use of such chemicals is still in the infant stage.

New chemicals are being developed at a phenomenal rate. The adoption of these new products by America's farmers will be hastened by the technical knowledge and information which you and other AG LEADERS supply.

January BETTER FARMING METHODS is designed to provide you with the latest information and "know–how" on the use of such chemicals and methods of application.

Watch for the January issue of BETTER FARMING METHODS. Get the latest news from the chemical front. Remember those who "know" read BETTER FARMING METHODS. It's the No. 1 professional magazine in the AG LEADER field.

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Farm Chemical Roundup
Farm Chemical Safety
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COUNTY AGENT NEWS

Teamwork Gets Results

The Kentucky Extension Service and the Lebanon Chamber of Commerce have teamed up in promoting an outstanding 4-H dairy program.

Fifteen years ago the county agent, G. H. Karnes, approached the secretary of the Lebanon Chamber of Commerce, E. J. Warms, suggesting that the Chamber of Commerce sponsor the 4-H Dairy Club members in the county. As a result of this, seven members of the Chamber of Commerce agreed to donate $5 in prizes and entertain the Dairy Club members at a banquet. Thirteen dairy calves were exhibited at this first Dairy Show. In return for this show and dinner, the Dairy Club members invited the Chamber of Commerce sponsors to a basket dinner.

The show and the dinner have been annual affairs ever since. The past year, more than 300 people attended the basket dinner. This included Dairy Club members, their families, Chamber of Commerce members, and their wives.

At the present time, one of the largest cheese manufacturers in the United States is developing plans for establishing a cheese plant in Lebanon. At least a part of this development is due to the work of the dairy program, sponsored by Extension and the Chamber of Commerce.

by C. N. McGrew
County Agent
Mansfield, Ohio

Rural-Urban Good Will

Clarence Spuller, Rush county, Indiana, is proud of the rural-urban good will in his county.

It had its start 14 years ago when the Rush County Extension Advisory Committee joined with the Rushville Chamber of Commerce to promote better understanding between the rural and urban people.

Meeting jointly to discuss ways to improve rural-urban relationships, a steering committee representing both groups started the Southeastern Indiana District 4-H Fat Steer Show and Sale some 12 years ago on a district basis.

Spuller explains that the success of the steer sale has led the local Junior Chamber of Commerce, who were also interested in promoting good will among rural and urban people, to sponsor a district 4-H Barrow Show and Sale.

The annual farmer-businessman

Ralph Kirch (left), Kent county 4-H agent, was named president of the Michigan 4-H Club Agents' Association. Emil Fimbinger (center), Washtenaw county 4-H agent was elected to the vice president post and George Bartlett, Osceola county 4-H agent was named secretary-treasurer.

Here, C. L. Spuller (third from left), and the rural-urban committee are in a planning session.

banquet is one way for the rural people to express their appreciation to the businessmen.

Much credit can be given to the County Extension office and C. L. Spuller for promoting rural-urban good will on a county and district basis.

Sheep Marketing Work

Kansas county agents are looking for ways to emphasize marketing in their Extension programs.

They have found a natural in the sheep production enterprise.

Kansas agents have helped organize and are working with 35 sheep marketing associations covering half of the 105 Kansas counties. Through these graded marketing organizations producers are able to "skim" off lambs ready to go every two or three weeks during marketing season. They are able to take advantage of group shipments and have volume enough to be competitive on the market.

This past season sheep marketing cooperatives have marketed 125,000 head of lambs on a graded basis in Kansas.

Producers in the Salina-Ottawa County Association in Central Kansas figure they net at least a dollar more per head as a result of the marketing program. The increase comes from better selling price as a result of volume and selling lambs on time. The effect of having lambs graded has improved quality, too. End

Earl Peterson, farm advisor from Montgomery county, Illinois, president of the Illinois Association of Farm Advisors, hands over the briefcase with all the information to Arnold Kemp, Knox county farm advisor, who will take over the duties of president.

County agents and an experiment station team from Oregon State College have staged soil pest demonstrations in three Oregon counties this summer. The county agents select farmer cooperators and handle advance and follow-up publicity for the meetings. Farmers having nematodes of symphylids in their soil have been very appreciative of the research-Extension teamwork to control these major soil pests.

4-H Agent News

by Delwyn Dyer

Learn Poultry Business

Francis Mansue, 4-H Agent of Ocean county, working with state poultry specialist, Mr. John Bezpa, has devised a new 4-H poultry project for older club members. It is a "poultry record" project and involves a member keeping all types of records on at least 500 layers and in some commercial poultry flocks. The idea is to check on feed effiicency, management practices and other factors that affect egg production.

The farmer then reviews findings and analyzes them to see if his operations can be improved. Mansue heads the 4-H Poultry Committee jointly appointed by the New Jersey Club Agents Association and state 4-H office.

Former President Honored

Former NACCA president, Cecil Eyestone, Montgomery county club agent, Kansas, for over 12 years, has become assistant state club leader in Kansas. Mr. Eyestone was one of the organizers of NACCA. He received his master's degree from Colorado A & M this summer.

Own 4-H Bus

K. C. Festerling, Emmet county, Michigan, passes on these experiences concerning the county ownership of a 4-H bus.

The Emmet county 4-H bus carried 31 groups, or a total of 950 boys and girls on conservation tours in May and early June.

Folks ask, "Can I just buy an old school bus and expect to have much good service?" I'd say, "No." This bus had to have a new floor, eight new seats, king bolts, spring shackles, rebuilt motor, drive shaft carrier bearings, interior paint, exterior paint, universal joints, bumping and leading, new door weather strips, heater motor overhaul, new clutch plate, throwout bearing, transmission main drive, idler, front and rear transmission bearings, one new tire and radiator clean-out. All this repair certainly made the project a practical venture.

At least we knew it wouldn't fall apart on the highway. Total investment in the bus, to date, $316, including $75 purchase price, insurance and license. About $50 in oil, tubes, and parts has been donated. End.

FARM MECHANICS

for school and farm

by T. J. Wakeman
Professor, Agricultural Engineering
Virginia Polytechnic Institute

● LAST MONTH in this column I discussed school time allocations in relation to: (1) The major farm mechanics teaching areas, (2) the total four-year vocational agriculture program on an enterprise basis, and (3) sections of shop work activity.

Now let's look at some technical skills that may be used to develop the individual. A good example of this could be that a student would make a neat tool box while recognizing, learning to appreciate, and developing some 19 or 20 of the skills listed under woodworking.

Using the chart that was with this column last month, let me outline some specific projects that can be completed in each of the 14 areas of farm shop work.

1. *Toolfitting*

Selecting, using and maintaining emery wheels; making and using templates to maintain correctly angled edges on tools; sharpening axes, hatchets, knives, sickles, cold chisels, etc.; fitting handles in hand tools, and cleaning and preserving hand tools.

2. *Woodworking*

Identifying hand tools and equipment; figuring bills of material; squaring pieces of lumber; counter-sinking and setting screws; selecting nails, screws, bolts, and nuts; driving setting, and drawing nails; smoothing wood; finishing and preserving wood; operating a circular saw; beveling a board; laying out stock; gluing wood together; identifying and storing lumber; operating a jointer; operating a band saw; laying out and cutting rafters; operating a planer, and leveling and plumbing a building site.

3. *Painting, Glazing, and Insulating*

Measuring and cutting glass; replacing a window pane; calculating and maintaining a quantity of paint needed; mixing paint (color and thinning); cleaning and storing paint brushes; operating a paint sprayer; caulking, and insulating the dwelling.

4. *Hot Metal*

Heating metal; shaping and bending hot metal; tempering chisels, picks, and similar tools; heating and holding metal at proper temperature; cutting hot metal; drawing out chisels, picks, and similar tools; punching hot metal, and annealing metal.

5. *Cold Metal*

Recognizing metals; measuring metal accurately; center punching and drilling holes; cutting and tapping threads; operating a drill press; reaming and countersinking holes; bending cold metal; using hot and cold rivets; using a file; using hand and power hacksaw, and preserving metals.

6. *Soldering and Sheet Metal*

Operating gas torches; cleaning and tinning a soldering copper; soldering small holes; soldering a seam; sweating on a patch; selecting sheet metal; laying out and cutting a pattern in sheet metal; bending and forming sheet metal, and riveting sheet metal.

7. *Gas Welding*

Recognizing metals; attaching hose and gauges to cylinders; selecting proper rods and fluxes; selecting proper tips; adjusting gauges and flames for cutting and welding; preparing metal for welding; running a simple bead without rod; bronzing steel and cast iron; hardfacing metal; testing for gas leaks, and using safety precautions.

8. *Arc Welding*

Selecting proper electrodes; making proper settings on welder; preparing materials for welding; striking an arc; making smooth start and stop on beads; running a bead; cleaning a welded bead; making a simple weld (flat, three layers); making horizontal welds; welding vertically (a) down (b) up; making butt, lap, and fillet welds, and hardsurfacing metal.

9. *Farm Masonry*

Selecting masonry materials; calculating proportions for mixture; estimating quantity for job; mixing concrete; building forms for concrete construction; water-proofing concrete or block walls; finishing and curing concrete; coloring concrete; laying masonry, and making a stationary mail box stand.

10. *Farm and Home Plumbing*

Threading pipe; measuring and cutting pipe; reaming pipe; running and connecting simple lines; replacing faucet washer; repairing leaky valve; straightening and bending pipe; replacing valve and plunger leathers in pump; flaring and soldering copper tubing joints; laying a sewage drain of tile; planning and locating water system; planning and locating kitchen sink and drain; planning and locating bath and septic tank, and freeze-proofing the plumbing system.

11. *Tractor Maintenance*

Servicing the oil filters and changing the oil; completely lubricating a tractor; servicing the air cleaner; demonstrating safe tractor operation; winterizing a tractor; servicing ignition and spark plugs; servicing the cooling system; servicing the carburetor and fuel system; adjusting the brakes; servicing the transmission and final drive; adjusting the clutch; servicing the valves, and practicing safety precautions.

12. *Machinery Maintenance*

Painting farm machinery; repairing and replacing broken parts; making adjustments on farm machinery; assembling machinery; preparing machinery for storage; systematically checking farm machinery; hitching plows; figuring pulley sizes and speeds; calibrating grain drills and corn planters, and selecting and using belts.

13. *Farm Electrification*

Understanding electrical terms; mak-

ing a simple circuit (a single light); repairing damaged cords; reading meters; making connections to fixtures; making a circuit of lights in a series; selecting motors, controls, and switches; making circuit of lights in parallel; connecting motors; making trouble lights; wiring outlets; using overload protection devices; grounding electrical installations; replacing brushes in motors; cleaning and servicing used motors; planning a farmstead wiring system; replacing elements in electrical appliances; reversing a motor, and changing a motor from 110 to 220 volts.

14. *Facility Improvement*

Identifying facility improvement jobs that need to be performed in school and home farm shop, and constructing shop equipment for school and farm. End.

DIED WITH BOOTS ON

The spark plug illustrated here was one of several on an engine which started misfiring as a result of deteriorated rubber boots. A service engineer sent the plug and boot back to "headquarters" so that a bulletin could be issued on this subject.

When spark plug boots are in good condition, they will provide added protection against flashover under extreme moisture conditions. However, once the covers have become oil soaked or cracked, they can cause real trouble. Notice how the grease on the boots, illustrated here, had formed a carbonized path over the spark plug insulator, completely shorting out the plug. Either complete removal of the boot or replacement with a new one would have solved this difficulty. Check the spark plugs on your school shop motors to see that they are in good condition.

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Illinois Bankers Launch Farm Business Letter

Two Illinois farm banks have just announced a new milestone in providing service to their farm customers.

This new service, to be issued monthly as "The Farm Picture", provides farm customers with the latest market trends in livestock and crops, and in addition places special emphasis on farm credit and financial management. This publication will fit into any bank's public relations program.

"The Farm Picture" will be written, edited, and published by Farm Business Council, Inc., headed by Earl F. Crouse as president. Crouse was formerly vice president of Doane Agricultural Service, Inc., of St. Louis, Mo.

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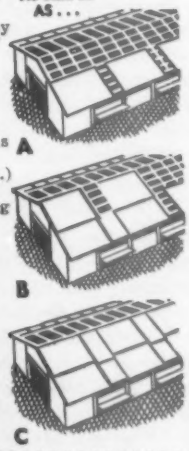

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EDITORIAL

by Frank Waddle

Just the other day I read in a state vo-ag newsletter a statement that went something like this: "There has been so much confusing information put out recently on the future of vocational agriculture, mostly to stimulate discussion, that many ag teachers are pretty confused about what is going to happen."

I'm sure many of you read some of this material.

Let me say at the outset that I do not profess to be an expert in the field of vocational education curriculum. But I would like to share with you some remarks by a leading vocational educator that may shed some light on this problem that's causing so much confusion.

Boiled down to essentials, here are some of their thoughts:

"Vocational education in agriculture was intended, and is still best suited, to meet the needs of students who are farming or are preparing to farm.

"Some persons are seriously advocating training for jobs in related agricultural occupations as one of the major objectives of vo-ag. However, the providing of such training becomes a difficult problem.

"Any teacher with as many as 40 in-school students already has a man-sized job if he is to provide a complete program of training for his boys, plus an adult farm program, plus individual on-farm supervision of farming programs.

"Another stumbling block in the way of such a program is that very few boys between the ages of 14 and 16 know positively and finally whether or not they are going to be farmers, storekeepers, salesmen, teachers, preachers, lawyers, doctors, or what have you.

"Suppose this obstacle could be overcome. Then how on earth could the ag teacher go about setting up a program that would fit those boys who select a couple of dozen different occupations.

"In setting up such a program, it would have to be practical above everything else. It would also need to be sufficiently flexible so that if a boy is not able to get a job in the related agricultural occupation for which he was trained, he will have to be specifically trained for several other types of rural service occupations that would likely exist in his community so that he could get a job.

"Vo-ag teachers in the North Atlantic Region, where there is probably more industry than in any other section of the nation, agreed at their regional conference that their job was to continue to give a well-balanced training program in vocational agriculture.

"What's more, representatives of some of our largest business and manufacturing concerns in the United States have said that they prefer to hire boys with a general background type of agricultural training than to have teachers of vo-ag give them special training. With the right sort of general background training, they say, they can take care of special phases of their training after they are on the job.

"Present vo-ag teachers, who have been successful in their specialized field, make no claim as to their ability to teach all of these additional occupations. Indeed, their jobs are complicated enough as it is.

"It is up to those who advocate that vo-ag teachers should provide special instructions in rural service occupations and occupations related to agriculture to come forward with a sound, practical proposal or program which would meet the needs of those who wish to enter such occupations. So far, such a proposal has not been presented."

CORNELIUS

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WYETH ANIMAL HEALTH TOPICS

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Remember, with *one shot* of INJECTION BICILLIN FORTIFIED, you solve your shipping problems.

STOP MASTITIS LOSSES

Dairymen know that mastitis not only means nonsalable milk, but also means the danger of udder damage and loss of production. Many of these losses can be stopped if **PENSTIX® or PENSTIX®-SM** is on hand for immediate local treatment.

PENSTIX Bougies provide crystalline procaine penicillin G in a special milk-soluble, nonirritating base to destroy common mastitis-causing organisms.

PENSTIX-SM is effective against many of the organisms which cannot be destroyed by penicillin alone. These bougies provide penicillin PLUS dihydrostreptomycin. These products hold the answer to your mastitis problems. They both are designed for painless insertion—there is no spoilage, no refrigeration required.

PENSTIX Bougies (75,000 units of crystalline procaine penicillin G) are available in vials of 6 or bottles of 12 and 25. PENSTIX-SM Bougies (25,000 units of crystalline procaine penicillin G and dihydrostreptomycin sulfate equivalent to 25 mg. of streptomycin base) are available in bottles of 12 and 25.

Bluecomb (Mud Fever) And C.R.D. Mean Poultry Losses

Bluecomb (mud fever) and the complicating factors of chronic respiratory disease can cause heavy losses during the holiday broiler season. But poultry growers can stop losses quickly with **BICILLIN® POULTRY FORMULA (Dry)**—Benzathine Penicillin G, Wyeth—which provides powerful, effective treatment against these diseases. BICILLIN POULTRY FORMULA (Dry) is economical—providing 2 to 3 days' faster treatment than any other method—and poultry require less treatment time.

BICILLIN POULTRY FORMULA (Dry) is a must during the heavy broiler season. It comes in protective aluminum-foil envelopes, 25,000,000 units of *dry* BICILLIN per envelope. Just add contents to drinking water.

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Neppco Grand Champ Award for 2nd Straight Year...

...also won top award in 1955 Contest!

For the second straight year, DEKALB CHIX are Grand Champs of the Egg Production Division of Neppco's Annual Egg-To-Chick Show. The Chix from the DeKalb Hatchery at York, Pa., (shown on the left) scored highest to win over all 39 other entries this year. In 1957, DeKalb Chix from this same hatchery also won over all other entries. And, in 1955, DeKalb Chix entered by the Metz Hatchery at Belleville, Pa., was named Grand Champ over 69 other entries. Each entry's 60 eggs are graded on uniformity of size, weight, color and shape; also shell texture, condition, interior quality and hatchability. 25 baby chicks selected at random are scored for vigor, condition, weight and uniformity of color and size. Yes—DEKALB is an Outstanding name in CHIX, because they're producing Outstanding RESULTS the Country over. Order them TODAY!

Joe Claybaugh, (left in the photo at the right) DeKalb's Northeastern Sales and Hatchery Supervisor, congratulates Robert Houser (right) Manager of DeKalb's Hatchery at York, Pa., whose entry of DeKalb Chix won the Grand Champ award for the second straight year in Neppco's Egg-To-Chick Show. Shown above are Grand Champ plaques awarded DeKalb Chix in 1957 and 1958.

See your DeKalb Dealer or your Nearest DeKalb Associate Hatchery and order your DeKalb Chix Today!

DEKALB AGRICULTURAL ASSOCIATION, INC., DEKALB, ILLINOIS

Commercial Producers and Distributors of DeKalb Seed Corn, DeKalb Chix and DeKalb Hybrid Sorghum

IF YOU KEEP RECORDS, YOU'LL KEEP **DEKALB CHIX**